Twenty-two Tried-and-True Teaching Tips for College Instructors

By Jana Hunzicker, Ed.D.
Professor and Associate Dean for Academic Affairs
College of Education and Health Sciences
Bradley University

Please contact Jana Hunzicker at jhunzicker@bradley.edu with questions.

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Teaching Tip #1
Learning Goals: The North Star for your Course

Great news! You're teaching a new college course, and you have loads of ideas. You've selected a textbook, begun planning lectures, and even drafted a few assignments. But soon, you grow confused. What is the purpose of each activity? Without course learning goals, all you have is busy-ness. Learning goals are the North Star for your course. Written well, they will guide you from what to teach (*curriculum*) to how you teach it (*instruction*) to how you confirm – or disconfirm – that students have learned as a result of your efforts (*assessment*).

If you are working from a *master course syllabus* created by your academic department for consistency across course sections, your learning goals are probably already established. But if you are creating a new course, or if no learning goals currently exist, your time will be well spent thoughtfully articulating exactly what students should know and be able to do by the time they complete the course.

Well-articulated course learning goals are sometimes referred to as *SMART goals*. Smart goals are **S**pecific, **M**easurable, **A**chievable, **R**elevant, and **T**imely or **T**ime-Bound (Drew, 2023). When writing course learning goals, all five characteristics should be evident. Keep in mind, though, that *timely* or *time-bound* may be implied.

Consider three examples of good, better, and best course learning goals. Notice that no goal is longer than one sentence, and the best goals include observable action verbs (underlined) and a fair amount of detail.

Good	Better	Best
Students will understand the American criminal justice system.	Students will describe the history of the American criminal justice system.	Students will <u>explain</u> the significance of at least five historical events that have shaped the American criminal justice system over the past century.
Students will be able to create and use graphs.	Students will be able to select the appropriate graphical form to represent a data set.	(By the end of the first module,) students will be able to accurately and appropriately <u>display</u> data using bar graphs, line graphs, and pie graphs.
Students will be able to write clear and cohesive papers.	Students will be able to write in an array of genres for a variety of purposes.	(By the end of the course), students will be able to <u>articulate, argue, and substantiate</u> a clear position on a controversial topic in today's society using conventions of academic writing.

Your course should have five to 15 learning goals. One learning goal per class period, week, or chapter of the course textbook is recommended, but some courses will require more or fewer based on the *course content* and/or duration.

To write each learning goal statement, follow these steps:

1. Ask: What should students know and be able to do by the **T**ime they complete this course? Think about what is **A**chievable for your students and **R**elevant to the course content.
2. Begin each goal statement with "Students will…" or "Students will be able to…"
3. Follow with a strong, observable action verb. Bloom's Revised Taxonomy of Learning (Shabatura, 2022; Wilson, 2020) is an excellent resource for selecting action verbs that distinguish various levels of thinking.
4. Complete the statement with a **S**pecific, **M**easurable desired learning outcome.

Learning Goals, Objectives, and Outcomes

Some college instructors question the difference between a learning goal, a learning objective, and a learning outcome. According to The Derek Bok Center for Teaching and Learning at Harvard University (2023), although the first two terms are often used interchangeably, some instructors differentiate *learning goals* as broad, overarching aims for a course and *learning objectives* as more concrete, short-term tasks that prepare students for achieving the overarching aims. In the following example, a learning goal is identified first, and the learning objectives supporting it are listed afterward:

> **Goal 1:** Research a topic using a variety of scholarly sources.
> **Objective 1a:** Compile, organize, and summarize scholarly literature.
> **Objective 1b:** Document historical and current trends, issues, and innovations.
> **Objective 1c:** Identify gaps in the literature.

A *learning outcome*, then, is the result of the learning process. *Desired learning outcomes* are the intended results of teaching and learning, such as the objectives listed above. With the qualifier "desired" removed, *learning outcomes* are the actual result of the learning process.

Throughout this Teaching Tips booklet, for the sake of simplicity, I use the term *learning goals* to refer to both learning goals and learning objectives…but in practice, I organize my courses using both learning goals and learning objectives. Regardless of the terminology – or the goal-writing approach – that you select, once your learning goals are established, you will be equipped for course planning and preparation. Use your learning goals to ensure that everything you teach, assign, and assess – and everything your students read, practice, and do – relates directly to one

or more of your course learning goals (see Teaching Tip #2). As the North Star for your course, your learning goals will provide all the direction you need!

References and Resources

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Key Take Away:

Use your learning goals to ensure that everything you teach, assign, and assess – and everything your students read, practice, and do – relates directly to one or more of the learning goals.

Warning!

When selecting action verbs to articulate each course learning goal, avoid verbs like "understand" and "appreciate" that are not measurable or observable.

Teaching Tip #2
Getting Curriculum Alignment Right

Once your course learning goals are written (see Teaching Tip #1), you are equipped for course planning and preparation. Use your learning goals to ensure that everything you teach, assign, and assess – and everything your students read, practice, and do – relates directly to one or more of the learning goals. By doing this, you will be aligning your curriculum.

Curriculum alignment is the process of connecting all readings, lectures, lessons, activities, assignments, and assessments to one or more learning goals. Faculty at the Cornell University Center for Teaching Innovation (2023) explain, "Clear alignment helps students understand how various parts of the course fit together, which in turn helps them learn" (para. 2). Curriculum alignment also helps instructors stay focused on the course learning goals in everything they do by clarifying the purpose of every assignment, lecture, activity, and assessment. To accomplish such clarity, experienced college instructors *plan backward* (Wiggins & McTighe, 2005).

Backward Planning

Consider the arrows in the table below. First, in the far left column, we see a course learning goal statement. This is our North Star (see Teaching Tip #1). Second, we skip to the far right column to think about the *formal* (or final) *assessment*. How will we confirm the degree to which students have mastered the learning goal? We see here that students will demonstrate their knowledge by writing an extended essay in response to a test question.

Course Learning Goal (First)	**Activity 1** (Fourth) ←	**Activity 2** (Third) ←	**Formal Assessment** (Second) ←
Students will be able to explain the significance of at least five historical events that have shaped the American criminal justice system over the past century.	Read chapter 1: "A History of Criminal Justice in the United States" →	Interactive lecture and think-pair-share activity: History of the American criminal justice system →	Extended essay question on Test One: Explain five historical events that have shaped the American criminal justice system over the past century. →

With the formal assessment for the learning goal established, we can now plan backward to ensure that the lessons, activities, and assignments required of students stay focused on the learning goal to prepare students to successfully complete the formal assessment when the time comes. In our example, students will be required to read a textbook chapter, participate in an interactive lecture (see Teaching Tip #11), and engage in a think-pair-share activity (see Teaching

Tip #13). While the planning process occurs in reverse order (arrows at the top of the table), students experience the learning process in sequential order (arrows at the bottom of the table).

In keeping with the principles of curriculum alignment, the *assessment criteria* for the extended essay question should be focused exclusively on the course learning goal, which is to explain five historical events. For example, while criterion such as using Standard English or correctly formatting references may be integrated into the grading criteria, students should not fail a formal assessment for erroneous reasons such as misspelling words, poor handwriting, or improper formatting. In this way, curriculum alignment not only helps college instructors design instruction focused on the course learning goals; it also helps instructors assess student learning based on the course learning goals.

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Bonus Tip!

Criteria is plural; *criterion* is singular:

- The *criteria* for the assignment included accuracy, elaboration, and clarity.
- Of the three, the most important *criterion* was accuracy.

Teaching Tip #3
A Course Syllabus Checklist

A *course syllabus* is a contract between course instructor and students. The Stanford Undergrad Advising Website (2023) tells students, "A syllabus can tell you nearly everything you need to know about how a course will be run and what will be expected of you" (para. 1). Preparing a thorough syllabus ensures that you will be well-prepared to answer questions and implement plans once your course begins. Use this checklist to make sure you've thought of everything:

Before you begin: ✓

1.	If possible, use a department master syllabus or a previous instructor's syllabus as a model.	
2.	Locate resources on your institution's website, such as the academic calendar, final exam schedule, academic integrity policy, university catalog, etc.	

Basic information:

3.	Course number, title, semester hours	
4.	Course description and prerequisites (see University Catalog)	
5.	Course meeting time and place	
6.	Instructor's contact information and office hours	
7.	Textbook information	

Department (or college) required information:

8.	Department/college mission or philosophy	
9.	Course learning goals	
10.	Course content outline	
11.	Other information	

Required by law:

12.	Americans with Disabilities Act (ADA) statement	

Course policies:

13.	Attendance	
14.	Late assignments	
15.	Grading scale	
16.	Plagiarism and cheating	

Course information:

17.	Use of learning management system (LMS), email, etc.	
18.	Course requirements and weighting (points or percentages)	
19.	Special features (e.g., field trips, special events, alternative assignments, etc.)	
20.	Course schedule	

Other considerations:

21.	Include a copyright symbol © and/or an intellectual property statement	
22.	Save and distribute as a pdf	

Once your syllabus is written, sit back, put up your feet, and take a few minutes to view Midland College's (2017) "It's in your Syllabus" video. It is a musical parody that will make you smile!

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Bonus Tip!

As you progress through the semester, you will identify things that you want to change or correct for future classes. Keep a running list of revisions as you go so that you can easily make the changes later!

Teaching Tip #4
Setting Up Your Gradebook: Percentages and/or Points

I have used a percentage-based grading system throughout my years as a college instructor, and I love it! Therefore, this teaching tip opens with a case for percentage-based grading systems. However, I have several colleagues who swear by the 1,000 point grading system, so this teaching tip explores both. The choice is up to you!

A Case for Percentage-Based Grading Systems

Many college instructors have developed elaborate point systems ultimately to determine final course grades. The problem with points is that they are not consistently equitable across assignments. For example, each question on a 10-point quiz is high stakes because each question is worth 10% of the total quiz score. On the other hand, a major project worth 500 points leaves ample opportunity for a passing grade. Points also require calculation and interpretation because the base standard varies from assignment to assignment. Percentages, on the other hand, allow you to consistently scale every assignment, from the 10-question quiz to the major project, in a way that students can easily understand: 100%.

Online *learning management systems (LMS)* such as Blackboard or Canvas make setting up a percentage-based grade book quite easy. In preparation, list your *course requirements* (everything students will do for a grade). Next, determine the percentage that each assignment will contribute to the total course grade. Obviously, your total should be 100%. My percentage-based gradebook for one of my courses looks like this:

Assignments/Assessments	Percentage
Exams (3)	45%
Interview	15%
Group Project	12.5%
Demonstration	12.5%
Learning Journal	10%
Professionalism (Attendance and Participation)	5%
Total	**100%**

Now you are ready to set up your online grade book. In some LMSs, you will designate the course requirement percentages by creating categories and *weighting* your various assignments so that some will count more than others in calculating the total course grade. In others, you will simply select percentages over points. You may wish to divide some assignments further. Based on our example (above), I list each exam separately at 15% each. You also may wish to nuance the value of some assignments beyond whole numbers. In my course the learning journal is submitted three times during the semester. Therefore, each time I grade it, students can earn up to 3.33% (for submissions one and two) and 3.34% (for the third submission) which totals 10% by the end of the course. Nuancing beyond whole numbers also works for tests and quizzes administered

through your LMS. For example, each exam in my course is comprised of 60 questions worth .25% each.

Once your percentage-based grade book is set up, your grading system will be equitable because all course requirements will be based on the consistent standard of 100%. Moreover, when your students receive their graded work, they will easily understand what "92%" means, as opposed to "460/500." Neither you nor your students will have to get out your calculators to figure out what 460 points means!

Advantages of the 1,000 Point Grading System

As an alternative, the same assignments and assessments set up on a 1,000 point grading scale look like this:

Assignments/Assessments	Points
Exams (3)	450
Interview	150
Group Project	125
Demonstration	125
Learning Journal	100
Professionalism (Attendance and Participation)	50
Total	**1,000**

Advocates assert that the 1,000 point grading system offers college instructors the option to continue using points while also maintaining the ease of calculating and interpreting grades (Connecticut Community Colleges, n.d.; Johnson, 2022). For example, a final score of 950 points easily converts to 95%, which most of us recognize as an "A."

Having extra points to work with also allows instructors greater discretion in deducting points from an assignment to reinforce areas where a student needs improvement without diminishing the overall assignment score too much. For example, on a 15 point assignment, an instructor might deduct 5 points, making the final assignment grade 10/15, which converts to a 67% "D." On the same assignment at 150 points, deducting 5 points results in a final assignment grade of 145/150 which converts to a 97% "A." In this way, the 1,000 point grading system offers more room for students to make the necessary mistakes of learning. Johnson (2022) explains, "…a well-designed course should allow students to mess up a few times…The 1,000-point framework easily incorporates this extra cushion into the course so that instructors and students don't have to haggle or debate late work and extra credit" (sec. 5). The 1,000 point grading system also eliminates the need for deducting partial points, such as .50 or .25 points.

A third advantage of the 1,000 point grading system is student interpretation. For example, an assignment worth 5 points on a 100 point grading scale may seem less important to college students than the same assignment worth 50 points on a 1,000 point scale. Therefore, students

are likely to take a 50 point assignment more seriously than a 5 point assignment, which may result in greater effort and increased attention to detail.

Setting up a points-based grade book in your institution's LMS) is similar to setting up a percentage-based grade book. If you are interested in exploring the 1,000 point grading system further, Connecticut Community Colleges (n.d.) offers a step-by-step guide – and a worksheet – for converting your current grading system to a 1,000 point system.

Weighting: The Best of Both Worlds?

If this teaching tip has confused more than informed you, *weighting* – mentioned earlier – offers an option that can combine points and percentages. Dreyfus-Pai (2016) explains that when all assignments and assessments – major and minor – are set up as 100 points each, they can be weighted by percentage based on their relative importance. For example, a 100-point quiz may be weighted at 10% and a 100-point project may be weighted at 25%. In this way, instructors can grade every assignment on a 100 point scale and still control which assignments and assessments contribute more or contribute less to students' final course grades. Following is an example of what a weighted, points-based gradebook might look like:

Assignment/Assessment	Points	Weight
Exams (3)	300	45%
Interview	100	15%
Group Project	100	12.5%
Demonstration	100	12.5%
Learning Journal	100	10%
Professionalism (Attendance and Participation)	100	5%
Total	**800**	**100%**

So, the question remains: Percentages or points? Or is a weighted, points-based gradebook the best option for your course? Please view the following references and resources for more information about the pros and cons of each grading approach.

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Stop and Reflect:

This teaching tip acknowledges "the necessary mistakes of learning" (p. 9). Is it possible to learn without making mistakes?

Teaching Tip #5
Embracing a Growth Mindset

We all know that you can't teach an old dog new tricks…or can you? Spoiler alert: You can, when both you and your dog embrace a growth mindset. Dweck (2006) defines a *fixed mindset* as the belief that intelligence is limited by genetics. A *growth mindset*, on the other hand, is the belief that intelligence can be developed throughout one's lifetime. Both college instructors and students have both growth and fixed mindsets depending on a variety of factors, including instructor biases, student self-image, and things like the subject matter, learning environment, and course delivery mode (Brainy Dose, 2019). As examples of a fixed mindset, an instructor might believe that students who transfer in from community colleges are not adequately prepared for a course; a student may consider herself "not a math person." Conversely, instructors and students with a growth mindset will enter into a new learning endeavor determined to make the most of it.

The first thing effective college instructors do is make a commitment to a growth mindset for all students, keeping in mind that learning will advance at a different pace – and in different ways – for different students (Tomlinson, 1999). But a growth mindset is more than just an attitude. For students, a growth mindset requires effort and persistence; for instructors, it requires having a repertoire of instructional strategies available to allow for students' pursuit toward mastery of the course learning goals to take various forms (Dweck, 2015). For example, if students arrive in a course inadequately prepared, a college instructor with a growth mindset might direct the students to academic support services, such as tutoring, and provide differentiated instructional opportunities, such as supplementary videos or before-class review sessions, in confidence that all students are capable of mastering the course content. A college instructor with a fixed mindset might allow students to struggle due to their belief that there is nothing they can do to help.

The most effective way for a person to overcome a fixed mindset is to address it personally. Chew's (2012) five-part video series on how to study is designed for college students but useful to college instructors as well. Even if you are an "old dog" who is afraid that it might be too late to learn new teaching and learning "tricks," Chew's videos are very helpful in terms of understanding how people learn as well as how to embrace a growth mindset.

References and Resources

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Key Take Away:

Instructors and students with a growth mindset will enter into a new learning endeavor determined to make the most of it.

Teaching Tip #6
Building Instructor-Student Relationships – with Boundaries

The influence of positive *instructor-student relationships* on the quality of teaching and learning is well-documented (Klem & Connell, 2004; Strachan, 2020). In the college classroom, students seek a "laid back" learning environment where they can interact informally and connect with their instructors on a personal level. Rapport between instructors and students is likely to increase student motivation to learn because students feel valued, more comfortable expressing their feelings, and more open to intellectual challenge (Cornell University Center for Teaching Excellence, 2023). Outside the classroom, social networking has been shown to enhance instructor-student relationships (Chugh et al., 2021; Clark-Gordon & Goodboy, 2019), but there are risks. Interacting with students via social media can create false feelings of familiarity, which can eradicate professional boundaries and "demote" college instructors from their status as authority figures (Malesky & Peters, 2012). So how can college instructors build healthy and constructive relationships with students without surrendering their authority? Six suggestions will help you build instructor-student relationships – with boundaries.

1. **Model professionalism in your face-to-face interactions with students.** If your students perceive you as an authority figure, they will treat you with respect. Dress professionally, arrive 10-15 minutes before class begins, expect your students to address you formally (Dr. Smith, Mrs. Jones, Professor Yang), and use professional language. With that said, you don't have to be stuffy. A sense of humor and "being yourself" can go a long way with college students.

2. **Be prepared and well-organized.** Your students will feel reassured knowing they can trust you to lead them through the course without vague information or last-minute changes. To prevent misunderstandings, alleviate student stress, and avoid conflict, post everything students will need to be successful in your course (course policies, weekly schedule, course materials, assignment directions, etc.) in a timely manner, ideally by the first day of class.

3. **Provide a rationale but maintain some degree of flexibility.** We all appreciate understanding why things are the way they are. Clearly explain the reasoning behind your course policies, learning goals, assignments and activities, etc. On occasions when students question, resist, or respond unenthusiastically, either re-emphasize your rationale or consider modifying your plans, if appropriate. Even minor revisions based on student feedback are likely to build instructor-student rapport.

4. **Establish clear expectations for outside of class communication.** As the old saying goes, prevention is the best medicine. Let your students know up front how you prefer to be contacted (phone, email, etc.), specify when you will hold *drop-in office hours* and respond to email, and clearly state "off limits" modes of contact (such as, "No texting.") If a student contacts you via text message after you've asked your class not to do this, maintain your boundary by not responding.

5. **Model professionalism in your virtual interactions with students.** Your written word is an extension of your actual self. In addition to using professional written language, share information appropriately (nothing too personal) and never use virtual communication to chastise or discipline. Begin email messages with a greeting and end with a closing to maintain a level of formality, and use social media responsibly (Aquino, 2020). Finally, always proofread your entire message for tone before hitting the Send or Submit button.

6. **Get to know your students but maintain appropriate professional distance.** Once you know – and can pronounce – your students' names, you can begin getting to know them as people. But don't get to know them too personally. Converse with them about their thinking and experiences related to your course and to their future plans but leave the rest of their lives to them. There is no need to know about their love relationships, drinking habits, or personal problems. They don't need to know these details about your life either.

Each college instructor must decide how to build, manage, and maintain healthy and constructive relationships with their students, both within and beyond the classroom. Keep in mind, though, that it is always easier to begin with authority and lighten up later, rather than vice versa.

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Teaching Tip #7
27 Ways to Assess Students' Prior Knowledge

Draw Draw what you already know about the topic. Explain what you drew.	**Create** Create a prototype of what you already know about the topic. Explain what you created.	*Demonstrate* Demonstrate how you would train someone on the topic or skill.
Mind Map Create a mind map of your prior knowledge on the topic.	List List all the keywords you can think of that relate to the topic or skill.	Interview Interview classmates about their knowledge of the topic.
QUIZ Take a pre-quiz on the topic.	**Point Out** Point out any misconceptions students are displaying. Keep notes. Address misconceptions.	DEBATE Organize a class debate about an issue related to the topic.
Challenge Create a challenge related to the topic. Evaluate students' prior knowledge as they work.	**Explain** Explain, as a group, what you already know about the topic.	*Fill In* Tell a story and ask students to fill in the blanks using their prior knowledge.
Reveal Ask selected students to play a character. Instruct the other students to guess who they are representing. Reveal the answers.	Expose Expose students to a real-life problem. Ask them to describe how they might solve it.	**Solve** Ask students to use what they already know and skills they already possess to solve a problem.
Watch Watch students as they work. Look for clues that they understand.	**Listen** Listen to what the students tell you. Ask them to clarify if needed.	**Experience** Engage students in an experience. Observe what they do.
OBSERVE Observe how students interact with one another. Engage students who are not participating or heard.	*Send* Send students on a scavenger hunt related to the topic or skill.	*Ask* Ask students questions about the topic or ask students to generate questions.
Speak Speak to the students about misconceptions. Ask why they believe what they believe.	**Rate** Rate each student's knowledge or skills on a continuum (or ask students to rate themselves).	**Judge** Ask students to judge their prior knowledge on the topic or skill.
Evaluate Evaluate the degree to which each student understands the topic.	*Show Me* Request of students, "Show me."	*Shout* Have students shout out what they already know about a topic.

Adapted from: TeachThought (2014). 27 ways to assess background knowledge.
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A picture paints a thousand words, and this teaching tip is one example. We often forget that our students come to us with some background knowledge about the content we intend to teach. Doesn't it make sense that we determine how much they know before diving in?

According to Cornell and Drew (2023), "*Prior knowledge* refers to the information and skills a learner has already accumulated before entering a new educational endeavor" (p. 1). Prior knowledge is built from all life experiences, both within and outside the classroom. The classic educational psychologist Jean Piaget explained that learning takes place when the brain organizes new information using the processes of *assimilation* (adding new information to existing information) and *accommodation* (modifying existing information to fit with the new information) (Bright Ideas of HJD, 2020; Education Online, 2021). Assimilation is easier; accommodation takes more time. For example, if a student is hearing the name William Shakespeare for the first time, they will assimilate, or absorb, this new information into their memory. If the student mistakenly thinks that Shakespeare was a military general but later learns that he was a great playwright, they will accommodate, or adjust, the new information by making a mental correction.

One of the greatest teaching challenges occurs when students hold misconceptions about what is true, accurate, or complete. This is when creative strategies for assessing students' prior knowledge can help. Asking students to draw a concept; listening to students explain a position; or watching students demonstrate a skill are non-threatening ways to generally determine what students already know as well as what you will need to teach and re-teach. If you use these *pre-assessment* strategies, chances are, students won't even realize you are analyzing their prior knowledge!

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Stop and Reflect:

When designing and teaching a new college course, begin by considering your own prior knowledge on the topic, both as a past learner and now, as an instructor. How can you rally your previous misconceptions, struggles, and learning experiences to effectively teach your students?

Teaching Tip #8
Negotiated Curriculum: What, How, When, and Where?

Now that you've mastered the "basics" of college teaching, you may be seeking a more *student-centered* approach. If so, negotiating your course curriculum might be an option. *Negotiated curriculum*, also known as integrated, co-designed, or co-constructed curriculum, is "a dynamic process in which what is taught and learned (the curriculum) is negotiated between teacher and students, rather than being solely pre-determined by the teacher" (Edwards, 2011, p. 144). Negotiating the *what, how, when, and where* of a course gives students greater ownership of their learning experience, increases student motivation, and fosters *student engagement in the learning process* (Harris, 2010). Negotiated curriculum has the potential to increase students' self-responsibility for learning with greater flexibility in terms of scheduling and how learning time is spent (Yazid et al., 2013). Negotiated curriculum also models innovation by creating more authentic learning experiences for students (Edwards, 2011).

A Step-by-Step Process
Chua (2015) offers six steps for negotiating curriculum with college students:

- **Step 0: Prep the class to expect the process.** Preparation may take the form of a "heads up" that students will have a voice in the design of the course (Chua, 2015), providing students with materials in advance of the first day of class (Harris, 2010), or asking students to complete a survey or other pre-assessment to stimulate their thinking about the course and what they hope to get out of it (Cook-Sather et al., 2014).

- **Step 1: Brainstorm learning goals and desired outcomes as a class.** Generally occurring early in the course, brainstorming may involve small group or whole class discussion, written comments, or one-on-one conferences with the course instructor. Variety is important here. As Chua (2015) explains, "Not everyone's voice is equally comfortable in every space" (para. 6).

- **Step 2: Converge on learning outcomes using a transparent, collaborative process.** At this point, students' ideas must be categorized and prioritized, and some may be ruled out. Professional standards or mandated course learning goals may provide a framework for student-generated goals; or students' goals may be added to a mandated list. From the beginning, make it clear that you – as the course instructor – have final authority over all aspects of the course, even as student input is highly valued (Chua, 2015; Cook-Sather et al., 2014; Yazid et al., 2013). Harris (2010) stresses that it is the course instructor's responsibility to "judiciously tailor the process not only to student wishes and participative ability but also to such circumstances as course or institutional objectives" (p. 24).

- **Step 3: Repeat steps #1 and #2 for assessments.** Next, students must consider how they will demonstrate course-related knowledge and skills. If your course is not guided by mandated

learning goals, Fallahi (2011) suggests differentiating assessments using Fink's (2003) taxonomy of significant learning. For example, in her undergraduate life development course, Fallahi assesses Foundational Knowledge using multiple choice questions, Application and Integration through case studies, Human Dimension through reflective writings, and Caring through a Likert scale self-assessment.

- **Step 4: Repeat steps #1 and #2 for pedagogy.** *Pedagogy* is a fancy word for teaching or instruction. Once the class has agreed on the course assessments, in-class and outside-of-class activities should be intentionally designed to equip students to successfully complete the agreed-upon assessments (see Teaching Tip #2). Fallahi (2011) organized a variety of class activities such as lectures, assigned readings, discussion-based debates, and reflection papers around key conceptual questions, co-created by instructor and students to guide the learning process.

- **Step 5: Reflect on the process.** Near the end of the course, if not periodically throughout, it is important for students to reflect on the quality of their learning experiences, the degree to which they are achieving the course learning goals, and how they can apply their course-related knowledge and skills. Ideally, the *reflection process* will involve introspective, written reflection and some form of sharing with the class. One college instructor explains, "To make students comfortable with this practice, the classroom has to become a place where each student is recognized as being on an individual path of improvement – and, an important point, no student has reached the end of the path, because *there is no end"* (MindShift, 2014, para. 11). Because leading the process of negotiated curriculum is a learning experience in and of itself, college instructors should take time to reflect as well.

"Start Small" Options

For some college instructors, negotiating the curriculum may seem overwhelming. The key is to start small. If you're not ready to dive in, Edwards (2011) suggests simply "making space" for negotiated curriculum.

One option is planning your course as usual, but leaving a few areas open to negotiation. Early in the course, you can review the tentative course schedule, and then engage students in discussion of which readings should be required, options for demonstrating knowledge and skills, when assignments should be due, or how points should be distributed (see Teaching Tip #4).

Another "start small" option is negotiating just one or two assignments or assessments. For example, if your course requires two non-negotiable assignments, allow students to determine the what, how, when, and where of a third assignment. This may be a simple choice of two options, such as writing a research paper or engaging in four hours of community service.

If you feel ready, you can offer students even more choice by making the third assignment open-ended, within thoughtfully pre-established parameters. For example, students must design and

implement a project that includes data collection, analysis, and interpretation using one of the analytical approaches taught in class. Within these parameters, students are free to select any topic, sample, research setting, etc. If you establish the assignment early in the semester with a due date much later, students will also have more choice in terms of when and where to complete the project. For example, a student may decide to collect data during an already-scheduled mission trip, significantly increasing the project's personal relevance. For such open-ended assignments, you may wish to structure students' planning with customized individual learning contracts that you meet with each student to discuss and approve before the project is implemented. Rossman (2015) offers one example. As an alternative, *chunking* (see Teaching Tip #21) is a whole class instructional strategy that allows you to pace and segment large projects throughout a designated timeline.

If all of this seems like too much, start with a group activity that engages students in open-ended problem solving or decision making related to the course content to prepare students – and you – for sharing opposing ideas, thinking outside the box, making decisions, and advocating choices. Alber (2012) provides a helpful overview for building students' collaborative skills during class time, skills that will help you and your students successfully negotiate the what, how, when, and where of your course!

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Warning!

Although negotiated curriculum is a highly rewarding experience for both students and instructor, it requires significantly more time and effort than traditional approaches to teaching and learning.

Teaching Tip #9
Designing Structured Class Activities

One of my earliest college teaching experiences was a disaster. I planned to introduce a theoretical model that I wanted students to apply using class discussion and examples. I thought I would simply explain the model and then let students "work with it" for a while. As planned, that afternoon in class, I explained the model and asked students to spend some time "working with it." After long seconds of silence, confused expressions, and sideways glances, students began talking to one another, but their conversation wasn't about the model. They were making small talk! My decision not to structure my class activity resulted in utter failure. I had not yet learned that every class activity must be thoughtfully designed to guide students toward mastery of the course learning goals.

To *structure* a class activity means planning it in such a way that it is clearly organized and easy to follow by both instructor and students. In its simplest terms, think beginning, middle, and end. Evans (2021) describes three types of structure: physical, emotional, and pedagogical. *Physical structure* involves the classroom layout. Will students be seated in rows or at round tables? Will they work individually, in pairs, or in small groups? *Emotional structure* has to do with students' feelings of safety and relevance. Most college students will engage in any class activity as long as they feel supported in taking risks and believe the activity is academically worthwhile. *Pedagogical structure*, created through careful instructional planning, includes step-by-step procedures for carrying out a class activity along with the creation of materials that will guide students as they work to complete it.

Class Activity Template

A pre-designed template is a great way to structure class activities. Once created, the blank template can be copied, pasted, and modified as needed for each unique class activity. Begin designing each class activity by giving it a name or title, identifying any assignments (such as an assigned reading) that students are expected to do in preparation for the activity, and listing the specific course learning goals that students will review or practice during the activity (see Teaching Tip #2). Reminding yourself of this information will help you stay focused as you design the activity.

Next, identify the materials needed for the activity. Consider both instructional materials, such as videos or textbooks, as well as practical materials students will need to complete the activity, such as a handout, graphic organizer, or markers. Creating materials that will guide students through an activity is a great way to incorporate pedagogical structure. For example, you may provide a step-by-step list of instructions, a flow chart to guide students' decision-making, a standardized report format, or a list of reflective questions. In addition to any verbal directions that you provide, such materials will allow students to move forward with the activity autonomously.

The introduction section of the template is where the activity itself will begin. Consider writing a brief script that you can actually read to the class when you introduce the activity. It is not a bad idea to remind students of why they are doing the activity (course learning goals) as well as what they have already done to prepare for it (preparation assignment). Generally, the introduction will only take a minute or two.

Class Activity Template
Activity Name/Title:
Preparation Assignment:
Course Learning Goal(s):
Materials:
Introduction (? minutes):
Direct Instruction (? Minutes)
Individual Task (? minutes):
Small Group Task (? minutes):
Whole Class Task (? minutes):
Informal Assessment:
Conclusion (? minutes):
Total Class Time Needed: ? minutes
Follow up Assignment/Activity:
Formal Assessment:

Not all class activities will involve *direct* (or instructor-led) *instruction*, and sometimes direct instruction will take place later in the activity. If direct instruction is included, it should be limited to no more than 20 minutes. Similarly, not all class activities will involve an individual task, a small group task, and a whole group task, but a good rule of thumb is to incorporate two out of the three. Consider the two examples provided. Both examples represent 40-minute class activities,

but Activity 1 involves direct instruction up front, in the form of a YouTube video, followed by an extended version of Think-Pair-Share (see Teaching Tip #13). Activity 2 begins with a small group task, which is paused midway through for direct instruction in the form of an interactive lecture, before continuing.

Activity 1	Activity 2
• YouTube video (5 minutes) • Individual Journaling (5 minutes) • Partner Sharing (10 minutes) • Full Class Discussion (15 minutes) • Exit Ticket (5 minutes)	• Small Group Task: Part 1 (15 minutes) • Interactive Lecture (10 minutes) • Small Group Task: Part 2 (10 minutes) • One-Minute Paper (5 minutes)

Keep in mind that the direct instruction and individual, small group, and/or whole class tasks will take the most planning time, and the more structure you provide the more likely your students will be to successfully complete the activity. Create written instructions, handouts, graphic organizers, questions, and other resources that will help students to complete the activity efficiently and in a uniform manner. Finally, be sure to add any instructor-created materials to the materials list so that you don't forget about them on the day of the activity!

Not all class activities will include a dedicated *informal assessment*, but even observing students as they engage in small group problem solving, or listening in on students' paired discussions are means of informal assessment. Both Activities 1 and 2 include an explicit informal assessment – an Exit Ticket and a One-Minute Paper – to help the course instructor gauge the degree to which students mastered the learning goals aligned with the activity (see Teaching Tip #18).

The conclusion section of the template is where you will bring closure to the activity. Again, consider writing a brief script that you can actually read to the class. Review the main take-aways from the activity and explain how the participation experience will help students complete upcoming assignments and assessments. As examples, the follow up assignment might be a written reflection due at the beginning of the next class period. A formal assessment might be several test items on the next unit exam, or an aspect of a major project due at the end of the semester. Like the introduction, the conclusion should only take a minute or two.

If you take the time – and it does take time – to thoughtfully design structured class activities, and the materials needed to implement them, you will soon have a rich repository of activities to draw from semester after semester. You also will be able to avoid teaching disasters, such as my terrible "work with it" experience!

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Key Take Away:

Every class activity must be thoughtfully designed to guide students toward mastery of the course learning goals.

Teaching Tip #10
The Class Agenda

Visualize a college instructor who rummages through a stack of disheveled papers to find something important while the class waits; searches for an answer to one student's question while everyone else grows restless; or runs back to the office to get needed materials while precious moments of class time slip away. Over time, disorganization breeds disrespect, so it is important to demonstrate from Day One that you are organized and in control of your classroom. By creating a class agenda and using it to guide class *planning, preparation,* and *pacing,* disorganization can be transformed into order.

A *class agenda* is nothing more than a brief, step-by-step list of everything that needs to take place during a given class period, paired with the estimated amount of time that each item is likely to take. To *plan* your class agenda, ask three questions: 1) What do we need to accomplish? 2) What is the logical order of activities? 3) How much time will each activity take? Your answers to these questions will allow you to create an agenda, such as this one:

Class Agenda

- Attendance/Announcements (10 minutes)
- What makes a middle school "good"? activity (30 minutes)
- Break (5 minutes)
- PowerPoint: AMLE standards (25 minutes)
- Assignment for next week (5 minutes)

Now that you have a class agenda, use it to *prepare* for class by considering each item on the agenda and gathering all needed materials. Based on the agenda above, you might need to gather notes about announcements, an attendance sheet, markers and chart paper, the link to your PowerPoint, your presentation notes, and a copy of the assignment for next week, with notes about what you want to highlight during class time. If you put everything in order and place the ordered stack of materials at your teaching station when you arrive in the classroom, all materials will be at hand when you are ready to use them. They also serve as a prompt, reminding you what to do next if you get sidetracked!

As an alternative, you can prepare your class agenda backward. I call this "*the pile method*." Prior to a class period, you may have a pile of notes and materials that must be covered, but no real plan for getting everything accomplished. In this case, begin by organizing your notes and materials in sequential order of what you want to do first, second, third, and so on. Then, use the sequential order of your "pile" to create your class agenda. Either way, you'll be ready for class when the time comes.

You also can use your class agenda to *pace* the class period. If you planned to spend 10 minutes on announcements and it takes 15 minutes, you'll need to adjust somewhere else. Perhaps you can skip the break. If the PowerPoint takes less time than you expected, you can spend more time on discussion, or go into greater detail about the assignment for next week. Regardless of how you adjust, your pacing decisions will be intentionally based on the class agenda you so thoughtfully prepared ahead of time!

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Key Take Away:
It is important to demonstrate from Day One that you are organized and in control of your classroom.

Teaching Tip #11
Making Lectures Interactive

We've all been there. Standing in front of the classroom, diligently "covering" the day's content as we watch our students' eyes glaze over. Or calling on a student to respond to a question and realizing too late that she hasn't been paying attention. Most experienced college instructors would agree that it has become quite difficult to hold students' attention, especially while lecturing.

Lecture, or one-way, instructor-to-students communication of course content, remains common in today's college classrooms because it allows course content to be shared with a large audience in a timely manner, enables instructors to control which content is elaborated and which content is de-emphasized, and engages students in real-time delivery of information. Although lectures should never be used exclusively, they can be transformed into multi-modal learning experiences when paired with prior reading and simultaneous notetaking and discussion (Charlton, 2006; Kelly, 2017).

Lectures are most effective when instructors understand their students' attention spans. A study by Bunce and colleagues (2010) used clickers (see Teaching Tip #14) to monitor college students' attention spans during a chemistry lecture. These researchers found that lapses in college students' attention typically last less than one minute and occur roughly 30 seconds, 5.5 minutes, 13.5 minutes, and 21.5 minutes into a lecture. After 22 minutes, students' attention lapses about every two minutes (Briggs, 2014). Knowing approximately when students are likely to "zone out," college instructors can design their lectures to accommodate students' attention spans using this *interactive lecture* format:

1. **During the first 1 or 2 minutes:** Open the lecture with a brief "warm up" activity, such as a multiple-choice question, a problem, a short story, or an example that reviews previous content or previews new concepts.
2. **Around the 5 minute and 13-minute marks:** Stop lecturing and engage students in a brief, interactive activity such as:
    - **Pause-and-think:** Throughout the lecture, pause every 5-10 minutes to pose a question or assign a simple task ("Think of a first-hand example from your childhood of a sociocultural learning theory, and share it with the person next to you.") Allow 2-3 minutes for students to share their examples with a classmate – and one or two examples with the entire class – before continuing with the lecture.
    - **Think-write-discuss:** Prior to the lecture, prepare three questions: 1) a motivational question, 2) a question seeking clarification about a specific point or concept, and 3) a reflective question (What aspect of this topic is still unclear?) Open the lecture with the first question, pose the second question mid-lecture, and close with the third question. Direct students to respond to each question in writing (No talking for two

minutes!) before sharing their responses with a classmate. Then, continue the lecture. Collect the student responses at the end of the class period to use as an informal assessment (see Teaching Tip #18).

- **Collaborate-and-apply:** Before the lecture begins, assign students to small working groups. After lecturing on a specific point or concept for up to 13 minutes, assign a lecture-specific question, problem, or task to each group. Allow 5-20 minutes for students to discuss, solve, or complete their in-class assignment and share their outcomes and/or processes with the class before continuing the lecture. This option works particularly well with extended group projects that require step-by-step procedures and close supervision throughout the semester.

3. **Around the 21-minute mark:** End the lecture. Or, using interactive lecture strategies, the 21-minute lecture can be "stretched" across 40 to 50 minutes of class time while student attention spans remain strong and the instructor has many opportunities to adjust pacing, content, and emphasis based on student responses. The ideas shared here are adapted from Schurr and Forte (2014, pp. 170-171). For more ideas on how to make lectures interactive, see "Lecturing Effectively" by the Teaching Commons (2001-2023) and the other references and resources listed below.

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Teaching Tip #12
Teaching Models: Instructor-Led, Inquiry-Based, or Both?

When I began my K-12 teaching career in the 1990s, I developed my teaching style based on Madeline Hunter's (1982) highly-structured model of *direct instruction*. Generally utilized for teacher-centered delivery of a single lesson, Hunter lessons follow a predictable instructional sequence.

Direct Instruction Model
Anticipatory Set
Learning Goals
Teaching/Modeling
Guided Practice
Checking for Understanding
Independent Practice
Closure

The lesson begins with an *anticipatory set* – sometimes called a "hook" – to get students' attention or engage their understanding of the lesson's relevance. The lesson's learning goal(s) – sometimes described as "*learning targets*" – are also explicitly stated so that students understand the purpose of the lesson. Together, these introductory steps are likely to take only a few minutes. During *teaching and modeling*, the instructor provides information or demonstrates a skill while students listen, observe, and possibly take notes. This is followed by *guided practice*, where students immediately apply or practice what was taught under instructor supervision and with the support of peers. Following guided practice, the instructor *checks for understanding* by asking questions of students and allowing students to ask clarifying questions. Toward the end of the lesson, students engage in *independent practice*, where each student individually applies or practices what they were taught. At the end of the lesson, the instructor brings *closure* to the learning experience by reviewing the learning goals, reminding students of what they have learned, and discussing next steps. Independent practice may continue beyond the class period in the form of homework.

A huge strength of Hunter's model is that it allows instructors to closely supervise the learning process and provide both affirmative and corrective feedback to students as needed. The model also works well for conveying information efficiently and for engaging students in introductory practice activities. Although considered out-of-date by some, other college instructors have pointed out the model's effectiveness (Thomason, 2021) and creatively demonstrated how people apply the model in real life all the time (Lee, 2015).

Inquiry-Based Model

Admittedly, the rigidity of Hunter's step-by-step instructional sequence can be limiting; but when instructor-led lessons are extended to include inquiry-based learning, students receive the

foundational content they need *and* actively apply or extend that content in directions most relevant to them. As an alternative, *inquiry-based learning* is an instructor-guided, student-centered approach to teaching that is based on student questioning, where students work together to formulate questions, conduct research, and eventually, articulate a position, answer, or solution (Khalaf & Zin, 2018). Inquiry-based learning can be used for a specific class activity or assignment (DeClerk et al., 2020), for teaching longer units of study (Linvill & Pyle, 2017), or to structure an entire course (Justice et al., 2007; Zeek, 2011).

Inquiry-Based Learning Model
Question Development
Guided Inquiry/Research
Independent Inquiry/Research
Sharing/Reporting

Sequential Model

When direct instruction and inquiry are combined sequentially, direct instruction is delivered first to provide information foundational to the inquiry in which students will soon engage. However, instead of bringing closure to the lesson following independent practice, the instructor transitions from instructor-led to inquiry-based learning, postponing closure until students have shared or reported the results of their inquiry.

Sequential Model: Direct Instruction *to* Inquiry
Anticipatory Set
Learning Goals
Teaching/Modeling
Guided Practice
Checking for Understanding
Independent Practice
(Transition to Inquiry-Based Learning)
Question Development
Guided Inquiry/Research
Independent Inquiry/Research
Sharing/Reporting
Closure

Integrated Model

When the two instructional approaches are integrated, the learning goals serve as the basis for student questioning, and students' genuine questions become the anticipatory set, or motivation, for learning. Teaching and modeling may be separated so the instructor can provide foundational information related to course content before modeling the inquiry/research process. At this point, students begin the inquiry process under the guidance of the instructor, most likely during class time so that students can ask questions and the instructor can provide

support as needed. As students gain confidence and momentum, guided inquiry becomes independent inquiry, which continues until students have answered their questions. Finally, students share or report what they learned, perhaps through class presentations, before the instructor brings closure to the entire learning experience by connecting the learning goals to the results of students' inquiries, helping students to generalize and apply what they learned through class discussion, and possibly, administering a *formal assessment* such as a research report. Throughout the integrated model, checking for understanding occurs frequently as students progress through the inquiry process.

Integrated Model: Direct Instruction *and* Inquiry
Learning Goals
Anticipatory Set: Question Development
Direct Instruction: Foundational Information*
Modeling: Inquiry/Research*
Guided Inquiry/Research*
Independent Inquiry/Research
Closure: Sharing/Reporting

* Followed by checking for understanding

Of the four instructional models described here, no single model is necessarily better than the others. Always consider your learning goals. Sometimes, direct instruction is most efficient; other times, inquiry-based learning is more effective; and often, a combination of the two is best!

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Bonus Tip!

Content is concrete; *concepts* are abstract. We use course *content*, or curriculum materials, to teach course *concepts*, or foundational ideas or understandings of a topic or discipline. Because concepts are abstract, student understanding must be assessed using observable measures such as asking students to describe, explain, or demonstrate (see Teaching Tip #1).

Teaching Tip #13
Classic Student Engagement Strategies

As new, tenure-track assistant professors, a colleague and I sought to become more effective college instructors by observing in each other's classrooms and offering feedback for improvement. Soon, we formalized our observations into a *Scholarship of Teaching and Learning (SoTL)* research project, analyzing our data in multiple ways and presenting and publishing our findings in three separate manuscripts. In a nutshell, we discovered for ourselves that our college students were motivated to engage in learning when they viewed information, activities, and assignments as relevant, felt emotionally connected to the course content, and experienced positive interactions with their instructors (Lukowiak & Hunzicker, 2013). Fortunately, all kinds of *student engagement* strategies are available for use in today's college classrooms. Following are six classic strategies, organized from five-minute tasks to activities that might consume an entire class period. In addition to actively engaging students in learning and providing an opportunity for informal assessment, your students will consider these class activities fun!

Anticipation Guide

Anticipation guides can be used before a lecture or assigned reading to generate student interest in a topic, preview key ideas, or assess students' prior knowledge (see Teaching Tip #7). Anticipation guides generally consist of about five true/false questions or agree/disagree statements. Create the anticipation guide in advance and use students' responses as a basis for discussion prior to instruction or reading. You can also ask students to revisit their responses following instruction and make changes to their responses if they wish. Changes in students' thinking serve as an informal assessment as well as an interesting springboard for class discussion.

Think-Pair-Share

Think-Pair-Share is a structured, student-to-student discussion process. Begin by directing students to make notes or reflect in writing individually around a specific topic or question. Clarify that students should not converse during this time. This is the "think" stage. After two or three minutes, ask students to turn to a partner and share their thinking. Allow two or three minutes for students to talk in pairs. Circulate while students are talking to keep them on task. This is the "pair" stage. Finally, get the class's attention and either 1) direct each pair of students to turn to another pair and share their thinking as a group of four or 2) bring students' attention back to whole class mode and invite individuals to share their and their partner's (or their group's) thinking, insights, or answers. This is the "share" stage. Use the whole class discussion to transition into the next phase of instruction.

Response Cards

Response cards are the "old school" form of electronic student response systems commonly known as "clickers" (see Teaching Tip #14). To prepare for using response cards, buy three different colors of index cards. Correlate each color with the letter A, B, or C. For example, write

a capital letter A on all of the green index cards, B on all of the blue index cards, and C on all of the yellow index cards. On the opposite side of each card, write TRUE (or AGREE) on the green cards, FALSE (or DISAGREE) on the blue cards, and I DON'T KNOW (or IT DEPENDS) on the yellow cards. Now, design multiple choice questions, true/false statements, and/or opinion statements that relate to the course content. When you are ready to use the response cards, pose a question or statement and direct students to hold up the appropriate card (and side) in response. Limit the activity to no more than five questions or statements per session. Response cards can be used as a discussion starter, for content review, or as an informal assessment. Use them at the beginning of a class period to discuss an assigned reading, every 20 minutes during a lecture to break things up and check for understanding (see Teaching Tip #11), or before and after a video or guest speaker to detect changes in student attitudes or opinions.

Four Corners

If you want to get students up out of their seats, try posting one large response card in each corner of the classroom. Ask a question or read a statement, then ask students to move to the corner of the classroom with the label they believe best expresses their response. Once students have taken a position, they will look around to see where their classmates landed. Don't be surprised if a few students change their minds at the last minute. Others may stand in the middle of two corners, or even in the middle of the room if they remain undecided. Wherever students land, the power of Four Corners is in the class discussion that ensues. Take time to ask students why they chose their responses. Allow for limited discussion but keep things moving (see Teaching Tip #10). Before asking the next question or reading the next statement, allow students to change their response by moving to a new location, if desired, based on what they learned during the class discussion. If you ask students to reflect in writing about the experience later, you will be surprised at how well they can articulate and justify their thinking as a result of participation in this activity.

Six Thinking Hats

Six Thinking Hats, a brilliant activity designed by Edward de Bono (BigIdeasGrowingMinds, 2020), is a strategy for engaging students in discussion or problem solving using assigned "lenses" or perspectives. Each person in the group wears a different colored "hat" for the duration of the activity:

Hat Color	Perspective	Discussion Example
Blue	Order & Control	"Let's stay focused on the problem."
Yellow	Supportive & Constructive	"That's a great point!"
Purple	Critical & Skeptical	"Can you provide a specific example?"
White	Neutral & Objective	"The common theme here is ___."
Red	Feelings & Emotions	"I sense tension. Let's go back to the main point."
Green	Creative & Open-Minded	"Let's explore the possibility that you both are right."

To engage students in *critical thinking*, or cognition that requires application, analysis, synthesis, and/or evaluation (Wilson, 2020) using the six thinking hats strategy, create a color-coded handout for each "hat." Assign a different "hat" to each person, or let each group distribute the "hats" among themselves. Whether the "hats" are assigned or self-selected, ask each student to keep his or her handout visible as a reminder of which perspective they are representing. With perspectives determined, pose a problem or assign a topic for discussion, and let students engage. If desired, you can re-invigorate the group process mid-activity by asking students to switch "hats." Because the six thinking hats strategy pushes students beyond what is familiar, some may resist at first. For this reason, you may wish to begin with a practice round, or a fairly straightforward discussion topic. Immediately following the activity, students may appreciate having time to debrief the experience or discuss the issue without wearing a "hat." This may lead to an entirely fresh discussion!

Jigsaw

Jigsaw (also called Curriculum Jigsaw) gets its name from the jigsaw puzzle, where each unique piece fits together to create a complete, cohesive puzzle. Jigsaw is a great activity for providing a balance of challenge (as in complex problems or difficult reading assignments) and support (since students work together cooperatively to complete a challenging task). To organize a jigsaw, assign students to "home groups" (three to five students per group). Next, assign a different challenging task to each home group: different mathematical story problems, different journal articles, or different sections of a textbook chapter, for example. Let each home group know up front that their purpose is to become "experts" on their assigned problem or reading because later they will be asked to teach, demonstrate, or explain it to other classmates. Allow time for each home group to prepare, providing suggestions and support as needed. This could take 15 minutes to an entire class period. When the home groups are ready, reorganize students into "teaching groups" so that each teaching group has one "expert" on each different problem or reading. Allow time for each "expert" to teach, demonstrate, or explain their problem or reading. The teaching phase is likely to take more time than the preparation phase since each "expert" will need time to explain or teach their content. Finally, direct students to return to their home groups to debrief and generalize across the various problems or readings or conduct the debriefing and generalizing as a whole class discussion or interactive lecture. Jigsaw takes significant planning and a lot of class time, but it also socially engages students in deep and active learning.

A Caveat…and Encouragement

While anticipation guides, Think-Pair-Share, response cards, and Four Corners don't necessarily require students to do much more than participate, Six Thinking Hats and Jigsaw require students to think critically and engage deeply in understanding difficult concepts. As a result, some students may be resistant to these activities at first. As a course instructor responsible for facilitating students' learning to the greatest extent possible (see Teaching Tip #5), don't let students' initial resistance lead you to believe that the activity was unsuccessful. Educational psychologists such as Leon Festinger and Jean Piaget asserted that *cognitive dissonance* – or intellectual discomfort and confusion – is necessary to the learning process (Sprouts, 2022). To

gently move students toward robust engagement, introduce Six Thinking Hats and Jigsaw with an easier question or problem, keep the activity brief, positively reinforce students' efforts during the activity, and take time to debrief as a class or ask students to reflect in writing individually following the activity. Efforts such as these will provide the emotional structure students need to feel safe in taking risks and trying new things (Evans, 2021) (see Teaching Tip #9). Once students become accustomed to the intellectual work and mental discomfort of critical thinking, they will be more willing to engage in these activities – and more skilled in managing their thinking, attitudes, and behaviors as they engage.

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Teaching Tip #14
Traditional Teaching…with Technology

In today's colleges and universities, instructors' use of technology is expected. Even in face-to-face classrooms, laptops, LCD projectors, and document cameras have become the norm, and most instructors have figured out how to use them (Clark & Hunzicker, 2023). Yet each year, college students become more technologically savvy. One study found that more than half of all Americans now spend about four hours a day using electronic devices for work, school, and pleasure (Zalani, 2021). It is no surprise that today's college students expect their instructors to use state-of-the-art technology, within and beyond the classroom (Ellucian Research, 2017).

Among today's college instructors, technology usage runs the gamut from minimal to sophisticated. However, technology usage alone does not necessarily mean more effective teaching and learning (Clark & Hunzicker, 2023). Wise college instructors intentionally select and use technology to accomplish something more than what they can do without it. In other words, they understand that they can teach traditionally…with technology. Following are five strategies for pushing yourself to the next level:

1. **Utilize your institution's learning management system (LMS).** Whether your institution uses Blackboard, Canvas, Moodle, or something else, there are many advantages to managing your course via an LMS (Bouchrika, 2023). Perhaps most significant is the *online gradebook*, which calculates students' grades based on the parameters you establish and is viewable by students at any point in time. Using an LMS online gradebook means less work entering and calculating grades on student assignments and ensures 24/7 communication to students – two huge advantages over the traditional, paper-and-pencil gradebook (see Teaching Tip #4). *Online quizzes* administered through your LMS also have advantages over paper-and-pencil. One advantage is that *objective* quizzes and tests, such as multiple choice or true/false, can be set up to automatically calculate and record scores in the online gradebook, again providing less work for you and immediate feedback for students. Online quizzes also have the advantage of providing item-level feedback for students. For example, if the correct response to a multiple choice question is A but a student selects B, you may set up the quiz to provide immediate, corrective feedback to the student such as, "This choice is only true when statistical significance at the $p < .05$ has been determined." By using the item-level corrective feedback feature, online quizzes can be used as a teaching and learning tool as well as an assessment tool. *Usage statistics* offer a third advantage of using an LMS. If you are wondering which students have logged in to the LMS to retrieve the course syllabus, how long each student spent taking a quiz, or how many discussion posts a student viewed before submitting her own post, this information is available via an LMS. If you're ready to expand your use of instructional technology for the benefit of your students and yourself, expanding your usage of your institution's LMS is a good place to begin.

2. **Offer virtual drop-in office hours as an alternative to face-to-face meetings.** College students don't seem to show up in our physical office spaces to ask questions or receive assistance as often as they used to. It is more common these days for students to send us an email, which defeats the purpose of meeting with students *synchronously* and discussing their questions interactively. Another alternative to traditional drop-in office hours is meeting online, via an online meeting platform such as *Zoom*. Just as you maintain traditional office hours on certain days and times of the week, try offering virtual office hours on different days and times of the week. During virtual office hours, simply be available at your computer with your Zoom room open and the waiting room activated. Muting your audio and stopping your video will allow you to work at your computer without distraction until a student drops in for a visit. You may be surprised at how many more students will drop-in virtually compared to meeting with you in your actual office!

3. **Try video as an alternative to written communication.** Students write a lot in college. They type emails. They text. They write papers. They respond to essay questions. They participate in online discussion boards. Writing. Writing. Writing. One way to mix things up is to create an online discussion board through your course LMS site where students discuss the assigned topic or question via video. Some LMSs have built-in video tools. Another option is no-cost versions of video-creation tools available on the Internet, such as *Canva, Screencast-O-Matic*, and *Vimeo*. These open-access, online tools are very easy to use. Simply find the tool's home page and follow the directions provided. When recording is finished, users are able to view their recording before saving and uploading it. Unlike face-to-face discussions in a traditional classroom, when students video-record a response, they are more likely to prepare it in advance, which results in more thoughtful and detailed comments. Video discussions also offer the advantage of you – the course instructor – having the option to view the interactions *asynchronously* to understand exactly what each student contributed. In addition to asking students to use online video recording tools, college instructors can use them to record lectures, step-by-step instructions, or demonstrations that students can access on their own time outside of class. As one example, Bookwidgets (2020) provides several ways Screencast-O-Matic can be used to enhance your teaching.

4. **Engage students during class time with student response systems.** Classroom response systems – often referred to *as* "clickers," are a great way to engage students during class time. Clicker systems, usually purchased by an institution or unit and available to college instructors via a check out system, include handheld response systems that students use to offer an immediate response to a prompt, such as yes/no, agree/disagree, true/false, or A, B, C, D (Bruff, 2023). Clicker systems, which have been around for decades, allow college instructors to keep students actively engaged during class time as well as informally assess student understanding. One limitation of clickers is that there may not be enough clickers for each student to offer

an individual response. If, for example, you have 20 clickers and 30 students, consider organizing students into pairs and giving each pair one clicker. When a question or prompt is posed, students can use a Think-Pair-Share approach (see Teaching Tip #13) to discuss the question and decide on the best response together. This collaborative strategy is particularly useful when students are learning more difficult course concepts. Online options for encouraging real-time student responses are also available. For example, *Poll Everywhere* is a subscription-based student response tool where students can use their laptops, tablets, or smart phones to respond to instructor questions or prompts during class time. Unlike clicker systems, Poll Everywhere also accepts open-ended responses as well as the ability to calculate and visually display responses in real time. Like Zoom subscriptions, Poll Everywhere subscriptions include a personal "room" or URL where students can be directed to participate. One effective way to use Poll Everywhere is to gather information about students' prior knowledge before beginning a lecture or demonstration and then conducting the same poll after instruction has been provided (see Teaching Tip #7). In this way, Poll Everywhere can be used as a pre/post assessment in addition to creating interactivity among students during class time.

5. **Require electronic assignment submission**. A final idea for making the transition from traditional to technological teaching is requiring students to submit an assignment electronically via your course LMS. One advantage of electronic submissions is a *timestamp* that will record exactly when the assignment was submitted. Additionally, all assignments will be collected and stored digitally in one place, ready for your review and assessment when the time comes. Another advantage of electronically-submitted assignments is the opportunity to check student work for originality against plagiarism detection tools such as *Grammarly, EasyBib,* or *Turnitin.* While some of these tools are open-source tools available to students to self-check their written work prior to submission, others allow a free trial period before requiring a subscription. Turnitin, one of the most robust plagiarism detection tools currently available, is a subscription-based tool that allows the course instructor to determine the percentage of an assignment that may have been plagiarized from another source, including artificial intelligence (AI). A third advantage of electronic assignment submission is the ability to grade and provide feedback to students without stacks of papers and handwritten comments. As one example, *Track Changes*, a review tool available in Microsoft Word, can be used to offer edits, suggestions for revision, and comments that students can accept or reject at the click of a mouse.

Because technology should be used for a specific instructional purpose, wise college instructors ask, how can I use technology to accomplish something more than what I can do without it? By asking this question, even the most traditional instructors can thoughtfully enhance their teaching style – and their students' learning experiences – one technological step at a time.

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Stop and Reflect:

How can I use technology to accomplish something more than what I can do without it?

Teaching Tip #15
Teach Knowledge and Skills, Not Values and Beliefs

In theory, the fact that American colleges and universities tend to be liberal-leaning (Howland, 2023; Linvill & Mazer, 2013) should not be an issue. However, several studies document that political bias in today's college classrooms causes students to avoid discussing potentially controversial topics for fear of criticism and ridicule, lowered grades, and even physical harm (Linvill & Havice, 2011; Intelligent.com, 2021). As a politically conservative person, I have always tried to introduce my students to multiple perspectives, often by posing questions to prompt divergent thinking. Even so, beginning in 2019, I noticed that liberal-leaning "groupthink" had begun dominating class discussions. Apparently, it wasn't just my imagination. In one recent study, Republican students were two to three-and-one-half times more reluctant to speak up during class discussions than were Democrat students (Anderson, 2021).

Decades ago, Palmer (1998) reminded us that teaching is a moral enterprise. "We teach who we are," he wrote (p. 2). Because effective teaching begins with strong instructor-student relationships (see Teaching Tip # 6), being genuine with our students seems like a good thing. And it is. But teaching – like everything else we do – is value-laden. We often reveal our personal values when we teach, sometimes without even realizing it, simply by what we say or the words we choose (Roche, 2009). At our worst, we intentionally push our personal values onto our students both directly and indirectly by providing unbalanced coverage of multi-faceted issues, offering (or not offering) praise or acknowledgement, or expressing our personal viewpoints so strongly that students who disagree are silenced.

Consider these examples:

- During a small group discussion, one student remains silent after realizing that she stands alone in her beliefs.
- After the course instructor chuckles at one student's perspective, only students expressing support for the instructor's perspective continue to speak up.
- Knowing the course instructor's position on a controversial issue, a student is careful to complete assignments based on "what the instructor what wants to hear."

College instructors are certainly entitled to their own values and beliefs; but we must not indoctrinate – or attempt to change – our students' values and beliefs through our work as instructors (Gooblar, 2019; OAJ, 2020). It is professionally unethical to use our classrooms or our instructor authority to force students' adoption of what we think they should believe. Rather, our professional responsibility is to teach knowledge and skills within our academic disciplines, including learning standards, accreditation requirements, and course learning goals. Through the teaching of our academic disciplines, we can – and should – provide rich, balanced, and non-judgmental opportunities for students to develop their own values and beliefs (Elias, 2017; Roche, 2009) – even when they do not align with ours.

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Teaching Tip #16
Classroom Management: Firm, Friendly, Fair, Flexible

As a fresh-out-of-college teacher in my early 20s, I taught eighth grade language arts. There is no better way to learn how to effectively manage student discipline than to teach eighth graders who are only ten years younger than you! Whether you are teaching kindergarten, eighth grade, or college, the principles of *classroom management* are the same: You have to be firm, friendly, fair, and flexible. When I teach these principles to teacher candidates, I refer to them as "the four F words!"

Firm Yet Friendly

To effectively manage a college classroom, you first need to clearly communicate your course policies, along with possible consequences for violating those policies, in your course syllabus. For example, what is your policy for accepting late assignments? As you think about your course policies and consequences, consider using *progressive consequences*. For example, will you accept one assignment late, but all subsequent late assignments will receive a zero? Or will you accept assignments late up to three days, but after that 10% will be deducted daily until the assignment is submitted? By establishing course policies with progressive consequences up front, you have a plan to follow and you also put students on notice. On the first day of class, when you explain your course policies and progressive consequences, be *firm* with students. Not apologetic. Not flippant. Not militant. Just be matter-of-fact. It is important that students view you as a confident person and as the classroom authority from Day One.

At the same time, be *friendly* with students – which is very different from being students' friends. To be friendly means to smile, to greet students, to make small talk with them before and after class, even to tell a silly joke now and then. Being friendly helps to build teacher-student relationships (see Teaching Tip #6), which is an important student motivator for abiding course policies. If your students like and respect you, they will be more willing to follow your rules. And when they follow your rules, wise college instructors will offer reinforcement for good behavior. For example, at the beginning of a class period, an instructor might say, "Thank you to everyone who submitted their assignment well before the deadline. It allowed me to begin grading them earlier than I expected. Several of you will find your grades recorded in the gradebook already!"

College instructors experienced with classroom management understand that firm and friendly go hand-in-hand. For example, when a student approaches you after class and says he didn't have time to finish his assignment, an instructor might respond with a *firm yet friendly*, "I understand. According to our course policy, you can submit the assignment any time between now and Thursday without penalty, but after that I will deduct 10% each day until you turn it in. Do you think you can get it to me by Thursday?" In other words, be matter-of-fact and kind, even if you suspect that the student has been slacking off. We all appreciate undeserved grace. One of the best things you can do to build teacher-student relationships is give students the benefit of the doubt.

Fair yet Flexible

In addition to being firm yet friendly, it is important to be fair yet flexible. According to one online dictionary, the definition of *fair* is "impartial and just, without favoritism or discrimination." Therefore, it is imperative that you follow your course policies and progressive consequences for all students and in a firm but friendly manner. However, there are times when extenuating circumstances require flexibility. For example, if a student has been hospitalized and needs extended time to complete an assignment, it fits the definition of fair that you would relax your progressive consequences to accommodate the student. When in doubt about whether or not to accommodate a student with flexibility, wise college instructors ask the question, would I do this for any student in this situation? If the answer is yes, then *flexibility* is warranted. Sometimes, though, being flexible is more complicated. For example, if one student who received a D on a test asks if she can re-take the test and you want to allow her to do so, it is important that you also offer this opportunity to all students who received a D or an F on the test. By giving all students within a well-defined category the same option, you will be *fair yet flexible*.

A Real-Time Example

In addition to being firm, friendly, fair, and flexible in establishing and carrying out your course policies, another aspect of classroom management involves real-time classroom interactions. *Behavioral narration* (Canter, 2010) is one effective strategy for coaching students toward appropriate classroom behavior. First, give *clear directions* describing exactly what you want students to do. Then, as soon as students begin, use behavioral narration to describe students who are doing exactly what you directed. For example, "Javon is already getting supplies for his group; Group 3 is reviewing chapter 14 before they begin. Nice!" Such comments provide positive reinforcement for the students who are following your directions and prompt those who are not with an indirect reminder.

Behavioral narration will work for all but the most challenging students. These students will need individualized, more subtle cues. For example, if Benjamin is telling a joke and misses your attempt at behavioral narration, try *proximity*. Don't say a word; just walk over and stand nearby as you continue to supervise the rest of the class. Chances are Benjamin will take the hint and save his joke for later. Another subtle-but-effective cue is *"the look."* Try this one from across the room. Just lower your chin, catch the offending student's eye, and hold her gaze. Her misbehavior is likely to stop without a word. For added emphasis, you can use "the voice." For example, when a student in Group 2 raises his arm to throw a paper wad across the room, simply say his first name using a stern voice (*firm*). When he lowers his arm and gives you a sheepish grin, you can smile (*friendly*) and direct him to the recycling bin with a slow shake of your head.

Only after using behavioral narration and subtle cues should you consider giving consequences (*fair*); and when you do, remember that *less is more*. Unless a student does something so dangerous or disrespectful that it warrants immediate action, begin with the lightest consequence on your list, like a warning or detaining a student after class for "a brief chat" (*flexible*). Progress to more serious consequences only if the inappropriate behavior continues.

Classroom management takes a bit of practice, but college instructors who are firm, friendly, fair, and flexible find ways to encourage appropriate classroom behavior so that fewer consequences are needed, making classroom interactions more productive enjoyable for everyone.

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Bonus Tip!

If you find yourself in a back-and-forth confrontation where you've directed a student to do something ("Sit down. We will discuss this after class.") and the student resists, use *the broken record technique*: Simply repeat your directive – like the needle of a record player stuck in a scratch on a vinyl album – until the student complies.

Key Take Away:

It is easier to begin with high structure and authority and lighten up later, rather than vice versa.

Teaching Tip #17
Conducting a Classroom Equity Audit

As a college instructor, have you ever wondered about questions such as these?

- Do I encourage students sitting in the front to participate more frequently than those sitting in the back?
- Are my expectations for some student groups lower than my expectations for others?
- Are first-generation students having more trouble mastering key concepts compared to other students?
- Are the commuter students in my class struggling to fit in?

If so, you might be interested in conducting a *classroom equity audit* to ensure that your classroom offers equitable teaching and learning opportunities for all students.

Green (2017) defines *equity* as "fair access to and distribution of opportunities, power, and resources" (p. 6). *Educational equity* is achieved when "all learners are able to participate fully in quality learning experiences" (Poekert et al., 2020, p. 542). At the classroom level, educational equity is the responsibility of the instructor, and an occasional equity audit may help. Bombardieri (2019) describes *equity audits* as "internal reviews of key policies and practices to identify those that fail to effectively serve underrepresented students" (para. 4). Similar to the questions posed earlier, the need for an equity audit often emerges from an instructor's desire to investigate a specific question, or area of concern (Harris & Hopson, 2008).

Classroom equity audits are simple and straightforward. Once you have articulated the question you wish to investigate, just follow these steps:

1. **Observe.** Begin by looking and listening. You can learn a great deal by simply becoming more aware of what is happening before, during, and following class time. For example, if you are wondering which student groups are having trouble fitting in, observe where students choose to sit and how they interact with one another. Make note of patterns over time to confirm or disconfirm your interpretations.
2. **Collect data.** Is there data available – or easily gathered – that can help answer your question? Gradebook and attendance records may shed light. Student logins and time spent online may be useful as well. Checklists, seating charts, and video/audio recordings work well for "in the moment" data collection. For example, to clarify which students are participating in class discussion, create a class seating chart and record a tally mark each time a student speaks. By audio recording the discussion (with notice to students beforehand and for your ears only), you can analyze the recording later to assess, for example, the types of questions you ask – or the responses you give – to different students (see Teaching Tip #15).

3. **Ask questions.** You also can ask direct questions of your students. If you are wondering how comfortable students feel approaching you with questions, set up a one- or two-item, anonymous survey and ask students to complete it during class time to ensure a high response rate. Or have a heart-to-heart discussion with the entire class. Tell them you've been wondering and ask for their honest feedback. Some students may speak up right away, others may reach out to you individually after class, but either way, you can gather the information you're seeking.
4. **Reflect and adapt.** Whether you choose to observe, collect data, ask questions, or all three, reflecting on your findings and adapting appropriately is crucial. If you confirm that your classroom includes "insiders" and "outsiders," consider introducing activities that require students to group and re-group more often. If the data show that you frequently overlook students on the left side of the classroom, stand near that side of the room during discussions. If a student survey indicates that students perceive you as not easily accessible, ask students what you can do to better accommodate them.

By conducting a simple classroom equity audit, you can quickly and easily improve your teaching practice and your relationships with students (see Teaching Tip #6). You can also make great strides toward narrowing gaps that might be keeping some students from getting the most out of your class.

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Teaching Tip #18
Easy Informal Assessment Strategies

You have designed an awesome class activity. You try it out, and your students love it! But how will you know that your students have mastered the learning goal(s) for the activity? What is your plan for systematically detecting *student misconceptions* and partial misunderstandings before the big test, project, or paper? Informal assessment strategies – which are intended to be read and analyzed but not graded – will help you better understand what your students as a whole have learned as well as what you need to review or reinforce prior to formally assessing student learning.

KWL

KWL stands for Know, Want to Know, and Learned. KWL charts are typically three columns and can be completed as a whole class, in small groups, or individually. The first column, Know, is completed prior to instruction (see Teaching Tip #7). Ask students, what do you already know about this topic? and list everything students offer. The second column, Want to Know, is also completed prior to instruction. Ask students, what do you want to learn about this topic? and list students' responses in question form. Next, using the Want to Know column as a guide, engage students in instruction, reading, research, or other class activities related to the course learning goals. When all instructional activities are completed, return to the KWL chart to review the first two columns and complete the Learned column. In addition to asking students, what did you learn? you also may wish to ask, is the information in the Know column accurate? and, are there any remaining questions in the Want to Know column that we still need to investigate? KWL charts are particularly useful for designing *student-centered instruction* (see Teaching Tip #8) by showing students how to take responsibility for their own learning.

Know	Want to Know	Learned

One-Minute Paper

The one-minute paper is a quick informal assessment strategy that can be used following a reading assignment or at the end of a lecture to determine the degree to which students captured key points or concepts. Simply pose one question and ask students to respond to the question in one minute's time. Keep track of the time, and let students know when one minute has passed, but allow additional time for students who feel the need to keep writing. To assure anonymity and encourage authentic responses, students should not write their names on their papers. Collect the papers and read them after class to gauge the class's general level of understanding and identify misconceptions. Begin the next class period by reinforcing the points students understood well and clarifying the concepts that were not clear.

3-2-1 Exit Ticket

The 3-2-1 exit ticket is similar to the one-minute paper, but students respond in list form. Additionally, the one-minute paper is written in response to a specific question whereas the 3-2-1 exit ticket is open-ended. To use the 3-2-1 exit ticket as an informal assessment, create a generic form or direct students to list the following:

- Three new things I learned
- Two things I found interesting (or Two ways I contributed to today's class)
- One question I still have

Again, students should not write their names on their exit tickets. Stand at the door and collect the tickets as students leave the classroom. Read them after class to gauge the class's general level of understanding and identify misconceptions. Begin the next class period by addressing students' remaining questions. As a variation, you can begin the next class period with an *entrance ticket*, asking students to write down what they remember from the previous class period (or from an assigned reading, etc.) before moving forward with the day's instruction.

3	2	1

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Teaching Tip #19
Assessing Student Understanding

You ask your students to read an article that explores course content in light of current events. You design an in-class activity to illuminate a persistent issue in your academic discipline. You engage students in small group discussion around two opposing viewpoints. You craft an essay question that requires students to explain a new concept or apply a recently-taught principle…

Each of these instructional activities is likely to support students' developing understanding of course content, but how can you know for sure that students have mastered the intended learning goals? A *holistic rubric* is a great way to informally assess student understanding:

Learning Goal:		
Key Question:		
First Student Response	**Second Student Response**	**Third Student Response**
Full Understanding	**Basic/Partial Understanding**	**Minimal Understanding**

A *rubric* is an assessment tool designed to fairly and consistently evaluate student work based on clearly-defined criteria (Stevens & Levi, 2023). While *analytic rubrics* are used to assess several criteria using detailed descriptors across varying levels of performance, *holistic rubrics* group criteria into broad categories across varying levels of performance. To create a holistic rubric to assess student understanding, follow these steps:

1. Begin with your learning goal(s), which should always be SMART: Specific, measurable, achievable, relevant, and timely/time-bound (see Teaching Tip #1). What knowledge or skill do you want your students to come away with as a result of the instructional activity? Use the following sentence starter to write your learning goal(s): My students will be able to…

2. Now, generate a list of questions to guide students toward critical thinking as they engage around the topic. Wiggins and McTighe (2011) suggest that questions designed to elicit student understanding require students to explain or apply course content. Once you have a good list, select one question that best captures the heart of your learning goal(s). This is the key question you will use to assess students' understanding.

3. Next, anticipate three possible student responses to your key question. The first response should demonstrate full understanding; the second response should demonstrate basic or partial understanding; the third response should demonstrate minimal understanding and/or misconceptions. As an alternative, classify actual student responses into one of the three categories and use them to write a composite response that distinguishes each category.

4. Finally, use the anticipated or composite student responses to write a brief descriptor for each level of understanding. Be as specific as you can in terms of your intended learning goal(s). For example, what key information does each response include or not include? (see Teaching Tip #20).

Once your rubric is created, you can use it in a variety of ways. For example, on the day following an assigned reading, ask students to respond to the key question using an entrance ticket. Or, following a discussion or in-class activity, have students respond to the key question using an *exit ticket* (see Teaching Tip #18). Better yet, conduct a pre/post assessment by asking students to revise or add to what they wrote on their entrance ticket and return it to you as an exit ticket before leaving class. Read the responses to informally assess overall student understanding in preparation for the next class period.

Your rubric also can be used to determine the quality of an essay question response in alignment with your course learning goals. Use your rubric to distinguish an "A" from a "B" response, and so on. While grading, as you read students' actual responses, you may find that you need to revise/expand your descriptors slightly or add a nuanced level of understanding to your rubric (four or five levels instead of three, for example) based on actual student responses. Thoughtful and timely revision of your assessment rubric over time, based on students' actual responses, will make your rubric more *valid* and *reliable*!

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Bonus Tip!

Assessment rubrics are complex and difficult to design. Instructor-created rubrics often require a great deal of revision before they can be considered valid and reliable. If you're not ready to create your own rubrics, look for valid and reliable rubrics that have been designed by others. Use them as they are or modify them as needed for your specific assignment!

Teaching Tip #20
Pass, Fail, or Pending?

You want your students to engage in an authentic, online practice activity, but you don't want a high stakes assignment. How can you motivate students to devote their time and make a genuine effort without a substantial assignment grade? A nuanced pass/fail assessment rubric may be the answer:

Criterion	Pass	Fail	Fail
Quality Completion	The assignment was submitted on time and shows evidence of quality completion. (5 points)	The assignment was submitted on time, but student responses indicate that the assignment was completed in haste or without careful consideration of the related course content. (0 points)	The assignment is incomplete or was not submitted on time. (0 points)

Pass/fail assignments such as online matching activities, interactive case studies, and checks for understanding can be required for purposes of *formative assessment* and *self-assessment* of learning. Each pass/fail assignment should comprise no more than 5% of the overall course grade. Pass/fail assignments should receive 100% credit for completion when student responses show evidence of a good faith effort to accurately complete the assignment. If student responses indicate that the assignment was completed in haste or without careful consideration of the related course content, 0% credit should be given.

Nuanced pass/fail assessment rubrics also can be used to support *mastery learning*, an instructional approach in which students must fully and completely accomplish the current course learning goals(s) before advancing to the next level or set of learning goals. The mastery learning cycle, which has been shown to increase students' feelings of responsibility for learning, requires direct instruction, study or practice, formative assessment, and corrective instruction until the designated learning goals are achieved (Bouchrika, 2021).

Using the nuanced pass/fail assessment rubric, direct instruction and study or practice opportunities are provided for the entire class; and the rubric is used following the study or practice assignment to provide *formative feedback* for all students. The most time is devoted to students who have not yet mastered the assignment's learning goals. For students assessed as *pending*, meaningful *narrative feedback* in the form of instructor comments provides the information and impetus students need to persist toward mastery. Wiggins (2012) described meaningful instructional feedback as goal-referenced, tangible and transparent, actionable, user-friendly, timely, ongoing, and consistent.

Following is a generic example of what a Pass, Fail, or Pending rubric might look like:

Criterion	Pass	Pending	Fail
Mastery of Assignment Learning Goals	The assignment was completed on time and student responses show evidence that the assignment's learning goal(s) have been mastered. (5 points)	The assignment was completed on time, but student responses indicate that the assignment's learning goals have not yet been mastered. (0 points)	The assignment is incomplete, was not completed on time, and/or student responses do not show evidence of mastery. (0 points)

Instructor Feedback:
Jonathan, your paper is off to a good start! I notice that you didn't include a thesis statement, which makes your position unclear. I also would like to see you add section headings to transition the paper from point to point. Your third point seems weaker than the first two. Can you find more support for this one?

Equipped with meaningful instructional feedback about their first attempt, these students are given a second opportunity to complete the assignment and master the learning goals to achieve a passing grade.

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Teaching Tip #21
Culminating Course Projects that Don't Overwhelm

A college student early in the semester: "This is such a large project. How am I ever going to get it done?" A college instructor at the end of the semester: "There are so many projects. How am I ever going to get them all graded?"

College students need opportunities to apply key principles and solve authentic problems related to the course content. Often, this takes the form of a *culminating course project* near the end of the semester. But when such projects are not carefully planned, both students and instructor can become overwhelmed. Students may procrastinate, submit sloppy work, or plagiarize; instructors may resort to grading *holistically* without much thought ("This one's an A") or avoid assigning major projects altogether.

College instructors can design culminating course projects that challenge and don't overwhelm by using three instructional strategies:

- **Chunking** involves teaching one manageable section of content and then asking students to immediately apply it by completing a succinct, directly-related task.
- **Frequent feedback** involves guiding in-progress student work by providing specific information that describes how closely the work accomplishes its intended purpose.
- **Opportunities for revision** allow students a chance to tweak, polish, or completely re-do their work based on the in-progress feedback they receive before the final version is due.

I use these strategies to guide junior-year teacher candidates through the semester-long process of designing a five-day instructional unit plan. Beginning the second week of the semester, students complete weekly assignments that progressively build their instructional unit. The first assignment requires students to identify a topic, theme, and essential question; the second assignment requires them to describe the students they will be teaching; the third assignment requires them to identify learning standards and write SMART learning goals for their unit. By Week 5, they are selecting instructional materials. By Week 10, they are writing lesson plans and designing informal and formal assessments.

Each time a "chunk" of the instructional unit plan is submitted, I review it and assign a *holistic* score of 1 (fully completed, even if revision is needed), .5 (partially completed), or 0 (significantly incomplete or not submitted). I also offer *narrative feedback* with specific suggestions for revision (see Teaching Tip #20). In this way, I am able to provide timely, individualized instruction for each student in addition to the whole class instruction provided during class time; and students can make necessary revisions before moving on to the next assignment.

Near the end of the semester, teacher candidates submit their entire instructional unit plan, which consists of all previously-submitted assignments, revised and polished. Although the final

project is 20-25 pages in length, I have already seen each section once, and students have had an opportunity to make revisions based on the feedback I provided. Because the final version of the instructional unit plan is a second draft, it is much easier for me to assess and grade, and students are much more likely to excel!

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Bonus Tip!

If you suspect that a student has plagiarized an assignment, consider whether the *plagiarism* was a misunderstanding, a deception, or a theft. Understanding the student's motive can guide your decision to use the incident as a *teachable moment* or to give a consequence for academic misconduct.

Teaching Tip #22
More than Just the Last Day of Class

Near the end of the semester, on a listserv about college teaching, a faculty member asked for suggestions for conducting her last day of class. She was seeking ways to honor her students' hard work over the course of the semester as well as to celebrate her students' learning accomplishments. The first suggestion she received was simply one word: pizza.

I am sure the faculty member was disappointed with this response. She recognized that the last day of class should be more than just the last day of class. At the same time, however, she sensed that simply celebrating would forgo an important opportunity to pull everything together and send students forward inspired and equipped by their semester-long learning experience.

To create a last day of class experience that honors and empowers students, the culminating task or activity should incorporate five elements:

1. **Synthesis** – students combine the major course concepts to create something new or use their understanding in a new way.
2. **Reflection** – students think about their learning experiences and outcomes over the course of the semester and explore or articulate new insights.
3. **Connection** – students make connections between the major course concepts and their own lives, other courses or disciplines, and/or the world in general.
4. **Application** – students articulate specific ways they can put what they have learned during the semester into practice.
5. **Celebration** – students experience a sense of accomplishment, feelings of comradery, and hope for the future.

In addition, be sure to make your last day task or activity highly interactive. Create energy and enthusiasm by encouraging students to think creatively, speak honestly, and build upon one another's ideas. The experience can be intellectually challenging, but it also should be fun!

Bleicher (2011) describes a comprehensive last day of class activity that incorporates all five elements into an in-depth, interactive, course critique. Macpherson (2007) offers various 20- to 40-minute cooperative learning activities such as writing a legacy letter (p. 183) and exchanging success tips (p. 184) that can be incorporated into the last day of class. Faculty at University of California, Berkeley offer 16 even simpler last day suggestions…and it should be noted that the last one mentions pizza. ☺

These are just a few of many possibilities. I encourage you to begin thinking now about how you can structure this semester's last day of class to make it more than just the last day of class!

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Key Take Away:

Everything you and your students do, from the first day to the last day of class, should relate directly to the course learning goals. On the last day of class, send your students out into the world with feelings of accomplishment, satisfaction, and confidence in all they have learned from you and your course!

Indexed Glossary

accommodation – a cognitive function that occurs when learners modify existing information to fit with the new information (see page 17)

analytic rubric – an assessment tool, formatted as a table, designed to fairly and consistently evaluate student work based on clearly-defined criteria (rows) using detailed descriptors across varying levels of performance (columns) (see page 52)

anticipatory set –a brief, introductory experience or activity designed to get students' attention or engage their understanding of the lesson's relevance prior to beginning instruction (see page 31)

application – a "hands on" level of critical thinking where students practice or demonstrate what they have learned (see page 59)

assessment – the student product or performance, evaluation instruments, and processes used to determine the degree to which students have mastered one or more course learning goals (see page 1)

assessment criteria – the standards, benchmarks, or indicators used to determine the degree to which students have mastered one or more course learning goals (see page 5)

assimilation – a cognitive function that occurs when learners add new information to existing information (see page 17)

asynchronous – occurring at different points in time (see page 64)

backward planning – an instructional planning strategy where course learning goals are written first, formal assessments are designed second, and instructional activities to prepare students for successful completion of the formal assessments are designed third (see page 4)

behavioral narration – an effective strategy for coaching students toward appropriate classroom behavior by giving clear directions that describe exactly what students should do and, once students begin, by describing the actions of students who are doing exactly what you directed (see page 46)

celebration – an instructional strategy for positively reinforcing learning where students experience a sense of accomplishment, feelings of comradery, and hope for the future (see page 59)

checking for understanding –points in the sequence of direct instruction where the instructor asks questions of students and allows students to ask clarifying questions for the purpose of confirming understanding and identifying and correcting student misconceptions (see page 31)

chunking – an instructional strategy where one manageable section of course content is taught and mastered before the next manageable section of content is presented (see page 57)

class agenda – a brief, step-by-step list of everything that needs to take place during a given class period, paired with the estimated amount of time that each item is likely to take (see page 27)

classroom equity audit – a systematic internal review of classroom policies and practices conducted by the course instructor to identify policies and practices that do not effectively serve underrepresented students (see page 48)

classroom management – rules, expectations, policies, and procedures, paired with clear communication and close supervision, designed to ensure an orderly classroom and maximum student learning (see page 45)

closure – the point in the sequence of direct instruction where the instructor concludes the learning experience by reviewing the learning goals, reminding students of what they have learned, and discussing next steps (see page 31)

cognitive dissonance – intellectual discomfort and confusion experienced the learning process when students are assimilating or accommodating new information (see page 37)

course content – all curricular materials used to convey the knowledge and skills that students are expected to master as a result of completing the course (see page 2)

course requirements – everything students will do for a grade (see page 8)

course syllabus – a contract between course instructor and students that communicates nearly everything students need to know about how a course will be run and what will be expected of them (see page 6)

critical thinking – engaging in cognition that requires application, analysis, synthesis, and/or evaluation, based on Bloom's Revised Taxonomy (see page 37)

culminating course project – a major task or endeavor that requires students to integrate critical thinking skills and understanding of the course content to demonstrate scholarly and practical mastery of the course content (see page 57)

curriculum – everything that is taught as part of a college course, including course content, course materials, and instructor attitudes, opinions, and beliefs (see page 1)

curriculum alignment – the process of connecting all readings, lectures, lessons, activities, assignments, and assessments to one or more learning goals (see page 4)

desired learning outcomes – the intended result of teaching and learning (see page 2)

direct instruction – teaching and/or modeling by the course instructor while students watch, listen, and/or take notes (see pages 24, 31)

drop in office hours – designated days and times each week when the course instructor is available to meet with students face-to-face or virtually to answer questions and/or provide assistance (see pages 14, 40)

educational equity – fair access and equal opportunities for all learners to participate in quality learning experiences (see page 48)

equity – fair access to opportunities and resources (see page 48)

fixed mindset – the belief that intelligence is limited by genetics (see page 12)

formal assessments – large-scale, high-stakes, and summative (or final) student products or performances where students must communicate or demonstrate mastery of course learning goals at the conclusion of a unit of study and/or at the conclusion of an entire course (see page 4)

formative assessments – small-scale student products or performances periodically assigned by the course instructor throughout the course to gauge individual students' current level of mastery related to one or more course learning goals, as well as to provide an opportunity for the course instructor to offer instructional feedback to students (see page 55)

formative feedback – instructor ratings or comments offered while students' work is in-progress to guide students toward mastery of one or more course learning goals (see page 55)

growth mindset – the belief that intelligence can be developed throughout one's lifetime (see page 12)

guided practice – the point in the sequence of direct instruction where, immediately following direct instruction or modeling, students apply or practice what was taught under instructor supervision and with the support of peers (see page 31)

holistic assessment – an overall, general assessment of student work or performance (see page 57)

holistic rubric –an assessment tool designed to fairly and consistently evaluate student work based on broad categories of criteria across varying levels of performance (see page 52)

independent practice – the point in the sequence of direct instruction where each student individually applies or practices what they were taught (see page 31)

informal assessments – low-stakes, formative opportunities for students to communicate, describe, self-assess, or demonstrate their current level of understanding or mastery related to one or more course learning goals for the purpose of guiding the course instructor's teaching (see page 25)

inquiry-based learning – an instructor-guided, student-centered approach to teaching that is based on student questioning, where students work together to formulate questions, conduct research, and eventually, articulate a position, answer, or solution (see page 32)

instruction – delivery of course content and materials (see page 1)

instructional feedback – meaningful instructor comments or ratings that provide the information and impetus students need to persist toward mastery of the course learning goals (see page 55)

instructional pacing – making strategic decisions, both in preparation for and during class time, about how slowly or quickly instruction or instructional activities should progress and adjusting accordingly based on student needs and responses (see page 28)

instructional planning – thinking about an upcoming course, class period, or assignment and developing tentative ideas – and eventually a well-developed blueprint – for implementation, which often includes writing learning goals, selecting course materials, and articulating parameters. Instructional planning is a precursor to instructional preparation (see page 27)

instructional preparation – using thoughtfully developed instructional plans to review content, create and/or gather instructional materials, design class activities, and make decisions about instructional sequencing and pacing (see page 27)

instructor-student relationships – rapport and mutual respect between a course instructor and the class as a whole as well as between the course instructor and individual students (see page 14)

interactive lecture – an alternative to traditional lecture where the college instructor periodically pauses to actively engage students in discussion or activity before resuming the lecture (see page 29)

learning goals – broad, overarching aims for learning that articulate what students will know and be able to do as a result of taking a course (see page 2)

learning management system (LMS) –an online software application, such as Blackboard or Canvas, used by college instructors to post information, interact with students, collect assignments, calculate grades, and complete other instructional tasks (see page 8)

learning objectives –concrete, short-term tasks that prepare students for achieving the overarching aims, or learning goals, of a course (see page 2)

learning outcomes – the actual result of the teaching and learning process (see page 2)

learning targets – student-friendly language for learning goals or objectives when reminding students of the desired learning outcome(s) of an instructional activity (see page 31)

lecture – one-way, instructor-to-students communication of course content (see page 29)

making connections – a teaching and learning strategy where students build associations between the course content and their own lives, other courses or disciplines, and/or the world in general (see page 59)

master course syllabus – a standardized course syllabus created to ensure instructional consistency across several course sections or different course instructors (see page 1)

mastery learning – an instructional approach in which students must fully and completely accomplish the current course learning goals(s) before advancing to the next level or set of learning goals (see page 55)

modeling – active demonstration of a skill by the course instructor in real time while students listen, observe, and possibly take notes (see page 31)

narrative feedback – meaningful instructor comments or ratings that provide the information and impetus students need to persist toward mastery of the course learning goals (see pages 55-56, 57)

negotiated curriculum – a dynamic process in which what is taught and learned (the curriculum) is negotiated between teacher and students, rather than being solely pre-determined by the teacher. Also known as integrated, co-designed, or co-constructed curriculum (see page 19)

objective test items – test items, such as multiple choice or true/false, that have one correct or "best" answer (see page 39)

pedagogy – the practice and study of teaching and learning (see page 20)

plagiarism – a form of academic misconduct where a writer uses the exact words of others without directly quoting the source and/or giving credit to source (see page 58)

pre-assessment – formal or informal evaluation of students' current knowledge or skill prior to beginning instruction (see page 17)

prior knowledge – the information and skills a learner has already accumulated before entering a new educational endeavor" (see page 17)

progressive consequences – penalties for student misconduct that advance from lighter to more serious each time misconduct is repeated (see page 45)

proximity – a classroom management technique where the course instructor continues actively teaching, walks to the area of the classroom where the misbehaving student is sitting, and stands near the student while continuing to teach (see page 46)

reflection – a teaching and learning strategy where students think about, write about, and/or discuss the quality of their learning experiences, the degree to which they are achieving their learning goals, and how they can apply their newfound knowledge and skills (see page 20)

reliable – a rubric or assessment tool that measures consistently (see page 53-54)

rubric – an assessment tool designed to fairly and consistently evaluate student work based on clearly-defined criteria across varying levels of performance (see page 52)

Scholarship of Teaching and Learning (SoTL) – a scholarly approach to instructional research where college instructors systematically investigate their classroom teaching practices and the effects of their practices on student learning (see page 35)

self-assessment – a teaching and learning strategy where students evaluate their own work based on clearly-defined criteria across varying levels of performance to prompt self-motivation toward mastering course learning goals (see page 55)

SMART – an acronym that can be used to write learning goals that are specific, measurable, achievable, relevant, and timely or time-bound (see page 1)

structure – instructional parameters such as clear directions and visual organizers that make class activities or assignments easy for instructor and students to follow. Structure can be physical, emotional, or pedagogical (see page 23)

student-centered instruction – an approach to teaching where the course instructor serves as a learning facilitator while students engage in self-directed learning (see pages 19, 50)

student engagement in learning – active student participation in the learning process, students physically, cognitively, and emotionally (see page 35)

student misconceptions – student thinking or conclusions that are partially or completely inaccurate due to faulty reasoning or misunderstanding (see page 50)

synchronous – occurring simultaneously, or at the same point in time (see page 64)

synthesis – an advanced level of critical thinking where students combine the major course concepts to create something new or use their understanding in a new way (see page 59)

teachable moment – an unplanned yet timely opportunity to provide feedback, information, or redirection that adds value to students' learning experience (see page 58)

teaching – active engagement by the course instructor by conveying course content, coaching students as they engage in the exploration of course content, or offering substantive feedback to students as a result of their efforts (see page 31)

"the broken record technique" – a classroom management strategy used in a back-and-forth confrontation where the course instructor reiterates a directive repeatedly until the student complies (see page 47)

"the look" – a non-verbal classroom management technique where the course instructor simply stops and stares at the misbehaving student without smiling, and waits for the student to resume appropriate behavior (see page 46)

"the pile method" – an instructional preparation strategy where all notes and instructional materials for a class period are organized sequentially into a pile and then used to create a class agenda (see page 27)

"the voice" – a classroom management technique where the course instructor stops and speaks directly and briefly to the misbehaving student in a deep voice. Usually, stating the student's name is enough to prompt the student to resume appropriate behavior (see page 46)

valid – a rubric or assessment tool that measures what it is supposed to measure (see page 53-54)

weighting – a grading strategy where course assignments and assessments are allocated lower or higher values based on their relative importance (see pages 9-10)

Stop and Reflect:

Use the glossary to identify topics and strategies about which you would like to know more. Then, look for books, online resources, and professional development opportunities that can help you further develop your pedagogical knowledge and skills.

Notes, Ideas, and Questions