UCA UNIVERSITY OF CENTRAL ASIA

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NEXT STEPS

A Practical Workbook for Educators

About the Authors

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Hello and Welcome!

Teaching is evolving — quickly. New technologies, changing workforce needs, insights from learning sciences and increasingly diverse student experiences and expectations are all reshaping what it means to teach well. It's a lot to navigate and in the midst of it all, many of us are asking *how to teach in these times?*

There's pressure to adapt, to use new tools, rethink assessments, make learning more inclusive and apply new strategies. It can be both exciting and overwhelming.

We're still subject experts, and we still care deeply about our disciplines. We want to see our students engaged, curious, and developing the confidence to think independently. We want them to be adaptable and prepared for a future we can't fully predict.

That's why this workbook is grounded in reflection and purposeful adjustment. It's designed to help you take stock of what matters most, consider new strategies, and identify your *next steps*—small, meaningful changes that align with your values and your students' needs.

This is not a rulebook. It is a flexible, practical guide with ideas, tools, and prompts you can adapt to your own context in ways that feel manageable and meaningful.

Use it however works best for you:

- Start with the "Where Are You Now?" reflection on the next page
- Or just flip to a section that catches your interest

🔑 Inside, you'll find:

- Checklists to reflect and plan next steps
- Simple strategies to try out in class
- Tools to support inclusive practice and universal design
- Templates and examples you can adapt for your students

Some sections invite quiet reflection; others work well in conversation with colleagues. You don't need to get it perfect. Start small. Reflect. Adjust. Try one new thing, one idea. One shift. One conversation. That's how meaningful change happens.

With appreciation for all that you do,
—Mariia and Valerie

Special thanks to our CTLT colleagues Aichurok Mekisheva for formatting the workbook and Chynara Turatbek for the preparation of the e-book version. Their contributions have enhanced its readability and made it more accessible.

Contents

How to Use This Workbook

This workbook is designed to guide you step by step through the essentials of teaching and learning. Each part focuses on a key stage in the process, with practical strategies, examples, and activities you can adapt to your own context. Together, the parts build a complete picture: from knowing yourself and your students, to designing lessons, assessing learning, teaching effectively, and creating environments where students feel engaged and supported.

Here's the path you'll follow:
Part 1: Who Are You as a Teacher? —Reflect on your teaching identity, values, and priorities.

Part 2: Foundations for Effective Teaching—Explore research-based principles of good practice and ways to better understand your students' backgrounds, strengths, and needs.

Part 3: Designing Lessons—Plan purposeful lessons using outcomes, taxonomies, threshold concepts, and backward design.

Part 4: Assessing Learning—Align assessments with outcomes, write clear instructions, use rubrics, give feedback, and adapt to the age of AI.

Part 5: Engaging Students in Active Learning—Use approaches such as interactive lecturing, cooperative learning, and the flipped classroom to make lessons more engaging and participatory.

Part 6: Reflection and Deeper Learning—Support students so that they make connections, and reflect on their learning, while also using structured prompts to reflect on your own teaching practice and identify next steps in your journey as a teacher.

Each part begins with an explanation about what you will focus on and ends with a **Next Steps** section that connects to the following part in the workbook.

Part 1: Who Are You as a Teacher?

Teaching begins with knowing yourself. We begin by reflecting on your identity, values, and priorities as an educator. Understanding who you are shapes how you plan lessons, interact with students, and make choices in the classroom. You'll have opportunities to consider what matters most to you right now, and how this foundation influences your approach to teaching.

Your teaching philosophy isn't just something you write once for a course outline or portfolio. It's a living, evolving guide that shapes how you make choices about learning, students, and your own growth. Whether you're new to teaching or have years of experience, reconnecting with what drives your approach can help clarify what matters most in your practice.

💭 Reflection: What Guides Your Teaching?

- Why do you teach?
- What do you believe students need most in your subject or setting?
- How do you define a "good" learning experience?
- What kind of classroom or learning environment do you try to create?

There are no right answers, just honest ones. Teaching is always changing, and your perspective may shift over time, too.

▶ Try This:

Take 5–10 minutes to jot down a few words or phrases that describe your approach to teaching. If you're unsure, reflect on a moment when teaching felt especially meaningful—or especially challenging. What made the difference?

Complete the sentence: "As a teacher, I aim to…"
(e.g., "…support confident, curious learners," or "…connect theory to real life.")

This short reflection can become a touchstone for how you plan, adapt, and grow throughout your teaching.

💭 Reflection: What matters most for you right now?

Identifying your current priorities helps focus your energy and guides how you use this workbook. Depending on your context, you may be planning a new course, rethinking assessments, or trying to reach students more effectively. Clarifying your top priorities gives you a sense of direction and purpose.

Identify your top priorities by checking focus areas below:

- ☐ Understanding my students better
- ☐ Planning my lessons differently
- ☐ Designing or reviewing my course structure
- ☐ Improving student motivation
- ☐ Reviewing and revising assessments
- ☐ Making grading more transparent
- ☐ Enhancing learning through feedback
- ☐ Reflecting on my teaching practices
- ☐ Understanding how technology impacts teaching and learning
- ☐ Other: _____

My Top Priorities: Use the space below to write your priorities or teaching goals.

_____

_____

_____

_____

_____

You'll find practical strategies and examples for each of these focus areas in the corresponding chapters throughout the workbook.

Next Steps

Once you've reflected on yourself as a teacher, the next step is to understand your students. In **Part 2**, we explore what matters to learners, how to get to know them, and how to build on their strengths and needs.

Part 2: Foundations for Effective Teaching

Effective teaching rests on strong foundations. In this part, you will explore two of the most important ones: established principles of good practice in undergraduate education and strategies for understanding your students. The first offers a research-based view of what makes teaching effective across contexts. The second emphasizes the importance of knowing the learners in front of you—their needs, expectations, and prior knowledge. Together, these foundations will help you design lessons that are inclusive, purposeful, and effective.

Good Practice in Undergraduate Education

What does effective teaching look like across disciplines? In 1987, Arthur Chickering and Zelda Gamson reviewed a wide range of research on college teaching and learning. They identified seven principles that continue to guide good practice in undergraduate education. These principles offer a simple way to think about what makes teaching effective and where you might want to focus your attention as you plan or update your course or your teaching strategies and practices.

Seven Principles of Good Practice in Education

1. ***Encourage Contact Between Students and Faculty***
   Frequent interaction, whether in class, online, or through feedback, builds motivation, engagement, and trust.

2. ***Develop Reciprocity and Cooperation Among Students***
   Collaboration among students encourages deeper thinking, shared understanding and a stronger sense of community.

3. ***Encourage Active Learning***
   Students learn more effectively when they participate in solving problems, discussion, and reflection, rather than passively receiving information.

4. ***Give Prompt Feedback***
   Timely, constructive feedback helps students understand their progress and improve performance.

5. ***Emphasize Time on Task***
   Support students in managing their time and staying focused on meaningful learning.

6. ***Communicate High Expectations***
   Clear and high standards encourage students to strive for excellence and take ownership of their learning.

7. ***Respect Diverse Talents and Ways of Learning***
   Students bring different strengths and learning preferences. Effective teaching includes flexibility, choice, and inclusive design.

Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. AAHE Bulletin, 39(7), 3–7.

💭 Reflection:

- Which of these principles do you already apply in your teaching?
- Which one would you like to explore or strengthen in your course design?

▶ Try This:

Choose one principle you want to strengthen. Use the table of contents to locate a related section in this workbook. For example:

- Active Learning → see “Interactive Lecturing” or “Flipped Classroom”
- Prompt Feedback → see “Feedback and Practice”
- Inclusive Design → see “Understanding Your Students”
- Student Motivation → see “Designing Learning Outcomes” or “Assignment Planning”

Make a small change in one lesson, activity, or assignment. Afterward, reflect on what worked and what you might do differently next time.

Understanding the principles of effective teaching is important, but equally important is understanding the students who are in front of you.

Understanding Your Students

We often design learning based on what worked for us as students, such as how we studied, what kept us engaged, or what helped us succeed. Today’s students bring a wide range of experiences, expectations, and needs. Age, background, language, prior education, and access to resources all influence how they engage with learning.

A helpful starting point is to ask:

- How are my students’ needs, habits, and expectations different from mine?

The answer to that question can shift how we design our courses, structure feedback, or use class time. Even small changes based on what we observe in students’ behaviour and work patterns can lead to more inclusive, flexible, and effective teaching.

Patterns You Might Notice—and Strategies That Support All Learners

The table below describes some common patterns you might notice in your students’ behaviour or learning habits. These aren’t rules or labels, they are just starting points to help you reflect on how your students are engaging and where small changes in your teaching might help

What You Might Notice	Why It Matters	Helpful Teaching Strategies
Learners lose focus during long sessions	Cognitive overload is common, especially in lecture-heavy formats	Break content into smaller chunks; include pauses, check-ins, and short activities
Some students avoid text-heavy or audio-only materials	Not all students learn best through text or lecture alone	Use visuals, infographics, transcripts, and multimodal content
Students don't act on feedback—or seem unsure what to do with it	Feedback may come too late or be too vague	Use clear rubrics, self-assessment, peer reviews, and timely check-ins
Learners question the purpose of assignments	Motivation increases when learning feels relevant	Connect content to real-world examples, lived experiences, or student goals
Some students hesitate to participate	Confidence, language, or past schooling may affect comfort	Provide low-pressure ways to engage: think-pair-share, polls, writing before speaking
Students seem overwhelmed or fall behind	Many learners balance complex schedules and responsibilities	Offer flexible pacing, clear timelines, checklists, and scaffolds
Students rely heavily on digital tools without questioning them	Access doesn't always equal critical digital literacy	Build digital thinking with fact-checking, AI ethics, and guided tool use

💭 Reflection:

What patterns do you observe?
How might these observations help you better support your students?

_____

_____

_____

_____

Which strategies from the table feel most applicable to your teaching context?
(Consider: subject matter, class size, tech access, institutional constraints.)

Do you have suggestions for any other strategies?

_____

_____

_____

_____

▶ Try This:

Choose one small change you want to try. It could be a new way of presenting material, structuring feedback, or creating space for student input.

After you try it, reflect: What changed? What might you do next?

Once you begin to understand how your students learn, the next step is to get to know them more personally before teaching begins.

Getting to Know Your Students Before You Teach Them

Students don't enter your classroom as blank slates. They bring learning histories, cultural backgrounds, personal experiences, and unspoken expectations. These are invisible unless you intentionally use strategies to get to know your students better.

When we take the time to understand who our students are beyond their academic level we are better able to design learning that connects, challenges, and supports them.

For example:

- A student who has had a negative experience with projects may resist collaboration.
- A career-focused student may dismiss theory unless its real-world relevance is clear.

When we take the time to understand who our students are beyond their academic level, we are better able to design learning that connects, challenges, and supports them.

What to Look For

Here are three key areas that can reveal important insights:

- Prior Experiences: What has helped or hindered their learning in the past?
- Hidden Narratives: Are they telling themselves things like “I’m bad at writing” or “I always fail math”?
- Process Gaps: Have they missed key skills or concepts (e.g. time management, critical reading or digital tools)?

Try a Pre-Course Survey

One way to learn more about your students is through a short survey in the first week, or even before a class starts, if that is possible. Below is a sample you can adapt.

Sample Course Expectations Survey

Course Expectations Survey (Student-Facing Version)

Welcome! This short survey will help me understand how to support your learning in this course. Your responses are confidential.

Why are you taking this course? (Select all that apply.)

- It's a required course
- I'm interested in the topic
- It will help my future career
- Other: [_____]

How familiar are you with this subject?

- I'm completely new
- I have basic knowledge
- I have intermediate knowledge
- I have advanced knowledge

What do you hope to gain from this course? [Open-ended]

What kinds of activities, do you think, help you learn best? (Rate 1–4)

- Lecture
- Whole-class discussion
- Small-group work
- Writing to think (short in-class tasks)
- Presentations
- Practice questions & review
- Other: [_____]

What other learning activities work for you? [Open-ended]

How do you feel about class discussions?

- Very comfortable
- Somewhat comfortable
- A bit unsure
- Not comfortable at all

What challenges do you anticipate in this course? (Select all that apply.)

- Understanding course content
- Working in groups
- Understanding assignment instructions
- Time management
- Staying motivated
- Other: [_____]

Anything else you'd like me to know? [Open-ended]

Why This Works

- It prevents assumptions. A student with “advanced” knowledge may still lack critical thinking or writing skills.
- It builds trust. Students feel valued when their needs and experiences are acknowledged.
- It saves time. Addressing challenges early avoids mid-course confusion or last minute crisis management especially with assessments.
- It fosters a learning partnership. You're not just delivering content, you are designing a support learning experience.

Tip: It is a good idea to share a summary of responses with the class (e.g., “Many of you don’t like group work, but since it is important to work collaboratively—I'll be sure to give you specific instructions on how to work well in groups!”).

Task

After reviewing your students’ responses, list at least one adjustment you’ll make to your syllabus or course plan.

Example: Add a short discussion if many students mention workload concerns.

_____

_____

_____

💭 Reflection:

Before your next course begins, list three things you do not yet know about your students. Then, plan one way to find out about each of the things.

Example: “I don’t know what kinds of assignments they’ve done before” → Use a warm-up activity or discussion to ask.

_____

_____

_____

Climate of the Course

The social, emotional, and intellectual climate of a course has a powerful impact on how students learn. A positive classroom climate helps students feel respected, safe, and motivated to take risks in their learning. When the climate is negative or unclear, students may disengage, hesitate to participate, or focus more on protecting themselves than on engaging with ideas.

Why It Matters

A healthy classroom climate encourages curiosity, collaboration, and persistence. It gives students the confidence to ask questions, admit confusion, and share perspectives. The climate you create sets the tone for how students experience not only your course, but also themselves as learners.

Strategies for Building a Positive Climate

- Provide opportunities for small-group interaction – early peer connections reduce anxiety and build community.
- Co-design expectations and goals – invite students to help create classroom ground rules or a charter.
- Listen carefully and offer opportunities to be heard – signal that every voice matters.
- Make uncertainty safe – normalize not knowing and frame mistakes as part of learning.
- Examine your own assumptions – reflect on biases and unspoken expectations you may bring.
- Model respect and authenticity – show students that you value them by being genuine and inclusive.
- Balance learning domains – attend to cognitive (thinking), psychomotor (doing), and affective (feeling) aspects of learning.

Example Icebreakers Connected to Your Discipline

- Human Geography: Ask each student to identify a location where they'd like to conduct fieldwork.
- English Literature: Invite students to choose a fictional character they'd like to have dinner with and explain why.
- History: Ask students which figure, living or dead, they would invite to a cocktail party.
- STEM: Have students share a real-world problem they'd be most interested in solving.

Try This:

At the beginning of your course, work with students to draft 3–5 classroom agreements that set expectations for participation, respect, and collaboration. Post them (physically or online) and revisit

them periodically. Co-creating these agreements makes the climate meaningful to the group and easier to sustain.

Co-creating these agreements makes the climate meaningful to the group and easier to sustain. Once that environment is in place, the next question is: what knowledge and experiences are students bringing with them?

Building on What Students Bring

Understanding your students' experiences and expectations is the first step. The next step is to carefully consider what they already know both the accurate knowledge that can support new learning and the misconceptions that may hold them back. We often don't consider this. This is where prior knowledge plays a central role.

Prior Knowledge

The single most important attribute students bring to class is their prior learning and experience. This prior knowledge is like baggage: it can contain the essential building blocks needed to advance toward mastery, or it can be a heavy weight that slows and even impedes learning.

Why It Matters

Prior knowledge can **help or hinder** new learning.

- **Help:** Using students' own experiences to generate examples helps them make connections, build on what they know, and increase retention. For example, you can scaffold learning by explicitly linking to earlier classes or familiar contexts.
- **Hinder:** Insufficient, inaccurate, or deeply ingrained misconceptions can block progress. For instance, physics education research shows that even after formal instruction, students often cling to intuitive but incorrect beliefs (e.g., about why we have seasons or whether a feather falls slower than an anvil in a vacuum). If these misconceptions remain unaddressed, new learning has nothing solid to build on.

Strategies to Work With Prior Knowledge

Determine your students' prior learning

- Use diagnostic assessments such as brainstorming, mind maps, or quick self- and peer-assessments.
- Look for patterns in students' responses to identify common strengths and misconceptions.

Connect new knowledge to prior knowledge

- Be explicit about how today's topic links to what they already know.
- Make cross-links between courses, between topics within a course, and across disciplines.
- Encourage students to share personal experiences that connect with course material.

Try This

At the start of your next lesson, ask students to brainstorm everything they already know about the topic—including what they might be unsure about. Collect responses (on the board, a shared doc, or sticky notes). As you teach, return to these ideas, confirming accurate knowledge and addressing misconceptions directly.

Organizing Knowledge for Better Retention and Analysis

Why Organization Matters

Information that is meaningfully organized is easier to remember and apply. When students connect new knowledge to what they already know, they're more likely to retain and use it effectively.

Strategies for Organizing Knowledge

Chunking

- *What it is:* Grouping related bits of information into manageable units.
- *Example:* Instead of listing 10 facts, group them into 3 main categories.
- *Try this:* Look at your content—how can you group it meaningfully?

Graphic Organizers

- *Tools:* Concept maps, mind maps, Venn diagrams, timelines, flowcharts.
- *Use for:* Visualizing connections, comparing ideas, showing processes.
- *Prompt:* Choose one topic from your course and sketch a visual that connects its key ideas.

Concept Maps

- Students brainstorm main ideas and terms, organize them from general to specific, and connect related ideas with labeled arrows.
- *When to use:* At the start of a unit (access prior knowledge), during guided practice (synthesize information), or at the end of a lesson (review and check for understanding).

Mind Maps

- A flexible, personal version of concept maps. Students freely map their thinking about a topic, often including drawings, symbols, and diagrams.

Advance Organizers

- *What they are:* Introductory frameworks to help students anticipate and structure new information.
- *Examples:* Overviews, summaries, guiding questions, key vocabulary.
- *Tip:* Begin your lesson with a simple question or outline to activate prior knowledge.

Categorization and Classification

- Encourages students to sort and label information, reinforcing structure.
- *Classroom idea:* Ask students to group concepts by similarities or relationships.

Dual Coding

- *What it means:* Combining verbal and visual information to reinforce learning.
- *Example:* Explain a concept while showing a diagram or timeline.

Scaffolding for Analysis

- Provide sentence starters, analysis frameworks (e.g., cause-effect, compare-contrast), or question stems (e.g., “What does this remind you of?”).
- Help students break down complex ideas and build stronger arguments or explanations.

Try This

Choose a topic from your course that students often find difficult to remember or explain.

- How could you reorganize the content to make it easier to grasp?
- Could you use a visual structure, simple categories, or a question framework to support understanding?

Next Steps

Effective teaching grows from strong foundations. By reflecting on research-based principles and taking time to understand your students—their experiences, expectations, and prior knowledge—you have built a base for designing meaningful learning. With these foundations in place, you’re ready to move into Part 3, where the focus shifts to lesson design: creating clear outcomes and structured learning experiences.

Part 3: Designing Lessons

Planning effective teaching begins with clarity about what you want your students to learn and how you will help them achieve those goals. Building on the foundations from the previous section, you are now ready to design lessons that connect new concepts to students' knowledge and provide structured opportunities for practice and reflection.

In this part, we focus on the core tools of lesson design:

- **Learning Outcomes** – clear statements of what students should be able to do
- **Taxonomies and Threshold Concepts** – frameworks for structuring and deepening learning
- **Backward Design** – aligning outcomes, activities, and assessments for coherence

You will also find practical tools such as frameworks, templates, and checklists to guide your planning. By the end, you will have resources to build lessons that are purposeful, connected, and engaging.

Designing Learning Outcomes

Learning outcomes are the foundation of effective teaching. They describe what students will be able to do by the end of a lesson, module, or course. Well-written outcomes guide the choice of content, teaching strategies, and assessments. They also provide clarity for students about what is expected.

Strong outcomes:

- Begin with a single active verb that specifies the level of learning.
- Focus on essential knowledge, skills, or attitudes.
- Provide a clear purpose and connect to a broader context.

When outcomes are vague or overly ambitious, they can be difficult to assess and confusing for students. Precise outcomes create a roadmap for both teaching and learning.

Formula:

By the end of this course/module,

Students will be able to:
+ [action verb] + [knowledge/skill/attitude] + [context or condition].

When outcomes are vague or overly ambitious, they can be difficult to assess and confusing for students. Precise outcomes create a roadmap for both teaching and learning.

Examples of Well-Written Outcomes

- *Apply* the principles of conflict management *to analyze workplace scenarios.*
- *Interpret* historical sources *to explain patterns of social change.*
- *Create* a digital story *that communicates aspects of intangible cultural heritage.*
- *Demonstrate* integrity *in managing data according to ethical frameworks.*
- *Approach* problem-solving *with intellectual humility and curiosity.*
- *Design* an experiment *to test the effect of temperature on enzyme activity.*
- *Critique* a piece of visual media *for its use of cultural stereotypes.*
- *Compose* a short piece of music *that incorporates syncopated rhythms.*
- *Evaluate* a business proposal *to determine its financial feasibility.*

These examples show how the same outcome formula (verb + content + context) can be applied in sciences, social sciences, professional programs, or creative disciplines.

How to Write Strong Learning Outcomes

- Start with the verb: Use an action that can be observed (e.g., analyze, critique, design).
- Focus on the student: Outcomes describe what students will do, not what the instructor will teach.
- Connect to context: Link the outcome to a meaningful application.
- Keep it achievable: Ensure the outcome can realistically be reached in the time available.
- Align with assessment: If you cannot see evidence of the outcome, revise it.

Checklist for Reviewing Learning Outcomes

Ask yourself:

- ☐ Does the outcome reflect the desired knowledge, skills, or attitudes students should develop?
- ☐ Does it describe what the student will do, not what the instructor will cover?
- ☐ Can it be observed or assessed in student performance during the lesson or later during the course?
- ☐ Can the outcome be achieved during the lesson or the time that you allocated to it?

Try This

- Choose some of your current course outcomes.
- Rewrite them so that they each begin with a strong action verb.
- Add the knowledge or skill to be demonstrated.
- Provide a context or purpose that makes it meaningful.

Example:
Instead of: *"Students will understand photosynthesis."*
Revise to: *"Students will explain the process of photosynthesis and compare it with cellular respiration."*

_____

_____

_____

Once you have clear outcomes, the next step is to think about the *level of learning* they represent. This is where learning taxonomies can guide your planning.

Taxonomies of Learning

There are several taxonomies that describe different kinds of learning—cognitive, affective, and psychomotor. These frameworks provide useful ways to articulate the kinds of learning you want students to achieve. In this section, we focus on one of the most widely used: **Bloom's Taxonomy**, which identifies levels of cognitive learning—remembering, understanding, applying, analyzing, evaluating, and creating.

Using taxonomy verbs helps make outcomes concrete and measurable. For example, "understand photosynthesis" is vague, while "explain the process of photosynthesis" or "compare photosynthesis and respiration" makes the expected learning clearer.

While this section highlights Bloom's cognitive framework, other taxonomies address affective learning (attitudes and values) and psychomotor learning (skills and performance). These can be especially useful in disciplines that emphasize practice, performance, or professional skills.

When planning outcomes, consider the different kinds of learning your subject requires. Taxonomies can help you balance factual knowledge, conceptual understanding, practical skills, and critical thinking. To support this process, the table below provides **action verbs** aligned with the levels of Bloom's Taxonomy. These verbs can guide you in writing outcomes that are both clear and assessable.

Bloom's Taxonomy – Action Verbs

Level	What It Means	Sample Verbs
Remembering	Recall or recognize knowledge and facts	define, list, name, recall, identify, label, state, match, outline, select
Understanding	Explain ideas or concepts in one's own words	describe, explain, summarize, classify, discuss, illustrate, interpret, paraphrase, compare, give examples
Applying	Use information in new situations	apply, demonstrate, use, implement, practice, operate, calculate, solve, carry out, show
Analyzing	Break material into parts and explore relationships	analyze, differentiate, examine, contrast, compare, categorize, investigate, organize, question, test
Evaluating	Make judgments using criteria or standards	evaluate, assess, judge, critique, justify, defend, argue, recommend, prioritize, appraise
Creating	Put elements together to form something new	create, design, develop, construct, plan, produce, compose, invent, generate, propose, formulate

Examples of Taxonomy Levels in Practice

- Remembering: List the names of the capital cities of Central Asian countries.
- Understanding: Summarize the main themes of a novel.
- Applying: Use the quadratic formula to solve an equation.
- Analyzing: Differentiate between correlation and causation in a dataset.
- Evaluating: Critique the strengths and weaknesses of a public policy.
- Creating: Design an experiment to test a scientific hypothesis.

How to Use Taxonomies in Teaching

- **Check variety:** Review your outcomes. Are they mostly at lower levels (remember, understand), or do they also challenge students at higher levels (analyze, evaluate, create)?
- **Choose precise verbs:** Replace vague verbs like *know* or *understand* with observable actions (e.g., explain, analyze, design).
- **Match activities to levels:** Align tasks with the level of learning you want students to achieve.
- **Plan progression:** Sequence lessons so students move gradually from foundational skills to more complex thinking

Type of Outcome	Possible Strategies
Remembering & Understanding	Direct instruction, worked examples, guided reading, storytelling, visual aids
Applying & Analyzing	Case studies, simulations, problem-based learning, labs, cooperative tasks
Evaluating & Creating	Debates, design projects, peer review, research tasks, presentations, portfolios
Metacognition & Reflection	Reflective journals, self-assessments, one-minute papers, exam wrappers
Collaboration & Communication	Group discussions, think-pair-share, jigsaw, peer teaching
Attitudes & Values	Ethical dilemma discussions, journaling, community projects, service learning

Try This:

Choose one outcome from a course you are currently teaching.

- What taxonomy level does it represent?
- Could it be rewritten at a higher or lower level to better fit the purpose of your lesson?
- What activity could you add to help students reach that level of learning?

While taxonomies help you set the level of learning and choose appropriate strategies, some ideas within a discipline are unique because they transform how students see the subject. These are known as threshold concepts.

Threshold Concepts

Some areas of learning act as turning points. These are known as **threshold concepts**: ideas that are difficult to grasp but once understood, transform how students think about a topic or concept. Once a student truly understands them, they see the subject in a new light. Threshold concepts are often troublesome because they challenge prior assumptions or require students to think in unfamiliar ways.

Yet they are also transformative: once a threshold is crossed, learners can see and do things they could not before.

> *"A threshold concept represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress." (Jan Meyer and Ray Land, 2003)*

Identifying threshold concepts in your subject helps you:

- Anticipate where students are likely to struggle.
- Focus on what is essential rather than trying to cover everything.
- Design activities and supports that help students navigate these key points**.**

Examples of Threshold Concepts

- *In Economics:* opportunity cost
- *In Biology:* natural selection
- *In Academic Writing:* the difference between argument and opinion
- *In Mathematics:* the concept of a limit
- *In Cultural Studies:* positionality

How to Teach Threshold Concepts

- *Identify them in your subject:* What do students consistently find difficult, yet essential?
- *Acknowledge the struggle:* Let students know it is normal to be confused at first.
- *Use examples, analogies, and contrasts:* Help students see how the concept works in practice.
- *Give time and space for questions and explanations:* Repeated exposure, reflection, and application are key.
- *Encourage metacognition:* Ask students to reflect on how their understanding has changed.
- *Use varied formats:* Visual explanations, stories, models, discussions, and writing can all help.

Try This:

Think of a concept in your course that students often find confusing, but that is essential for deeper understanding.

- Why might this concept be troublesome?
- How can you guide students through the struggle?
- What supports could you build into your lesson to help them cross the threshold?

_____

_____

_____

_____

_____

With both your desired outcomes and your key concepts in mind, the next step is to consider *how to align them with evidence of student learning and the activities you design.* Instructional design, and particularly the backward design model, provides a framework for doing this.

Backward Design

A widely used approach to instructional design is **Backward Design** (Wiggins & McTighe, 2005). In this model, teachers begin with the end in mind. Instead of asking, *"What will I teach?"*, the question becomes:

- What should students know, be able to do, or value by the end of the lesson, module, or course?
- How will students demonstrate their learning?
- What teaching and learning activities will best support them in achieving those outcomes?

The Three Stages of Backward Design

1. **Identify Desired Results**
   - Define the knowledge, skills, and attitudes students should develop.
   - Distinguish between what is essential to learn and what is nice to know.
   - Example: In an economics course, the essential outcome might be *"analyze how opportunity cost influences decision-making.*

2. **Determine Acceptable Evidence**
    - Decide how you will know if students have met the outcomes.
    - Evidence may come from formal assessments (tests, essays, projects) or informal ones (observations, reflections, in-class activities).
    - Example: Students might demonstrate their learning about opportunity cost by *evaluating trade-offs in a real-world case study.*

3. **Plan Learning Experiences and Teaching**
    - Design the activities, resources, and supports that will help students reach the outcomes.
    - Consider scaffolding (breaking learning into smaller steps) and sequencing (building from simple to complex).
    - Example: Begin with a short video on trade-offs, follow with a group activity comparing everyday decisions, and end with a case analysis in class.

Why Backward Design Matters

Without alignment, teaching can become a series of disconnected activities or content-heavy sessions with little evidence of student learning. Backward design helps ensure that every part of a course or lesson is purposeful and connected to outcomes.

It also avoids common pitfalls such as:

- Covering too much content without clarity on priorities.
- Designing assessments that do not connect to outcomes.
- Expecting students to demonstrate skills they were never given the chance to practice.

When students see the clear connections between outcomes, activities, and assessments, they are more engaged and more likely to succeed.

Strategies for Using Backward Design

- **Start small**: Try backward design with a single lesson before applying it to an entire course.
- **Use guiding questions**: Keep asking "What should students learn?" and "How will I know?" to stay focused.
- **Share outcomes with students**: Letting students know the goals helps them see the purpose of activities.
- **Build in feedback loops**: Provide chances for students to test their understanding before high-stakes assessments.
- **Reflect on alignment**: After teaching, ask yourself whether the activities and assessments truly matched the intended outcomes.

▶ Try This:

Choose one lesson or module from a course you teach.

- Write down one **learning outcome**.
- Decide what **evidence** will demonstrate student achievement.
- Plan one or two **activities** that will help students prepare for that evidence.

Example:

- **Outcome**: *Explain how natural selection drives evolution.*
- **Evidence**: A short written explanation comparing examples of adaptation.
- **Activities**: Analyze case studies of species in changing environments; discuss how traits affect survival.

With outcomes, key concepts, and alignment in place through backward design, the next step is to translate these plans into lessons that structure learning effectively.

Planning Your Lessons

A lesson plan is more than a timetable of activities. It is a roadmap that helps you connect outcomes, assessments, and teaching strategies into a coherent experience for students. Careful planning ensures that class time is purposeful, balanced, and achievable. It also makes it easier to adapt when unexpected challenges arise.

When planning a lesson, keep three guiding questions in mind:

1. **What do I want students to be able to do by the end of the lesson?** (learning outcomes)
2. **How will students demonstrate their learning?** (evidence and assessment)
3. **What activities will support students in achieving that learning?** (teaching and learning strategies)

Elements of a Well-Designed Lesson

- ***Clarity of purpose:*** Students know what they are expected to learn and why it matters.
- ***Alignment:*** Activities and assessments connect directly to outcomes.
- ***Engagement:*** Students are active participants, not just passive listeners.
- **Scaffolding**: New learning builds on prior knowledge and skills.
- **Balance**: Lessons mix explanation, practice, and reflection.
- **Flexibility**: Plans can adapt to different student needs or unexpected situations.

Example: Planning with Alignment

Lesson Objective:

- ***Outcome:*** Evaluate the credibility of online sources to justify conclusions about a claim.
- ***Evidence:*** Students compare two articles that make different claims and explain which is more reliable and why.
- ***Activities:***
    - ✓ Begin with a short discussion of what makes a source trustworthy.
    - ✓ Work in pairs to apply a checklist for evaluating sources.
    - ✓ Share findings with the class and reflect on differences in judgment.

This lesson is short, but every step is clearly linked to the outcome

Strategies for Effective Lesson Planning

- *Start with outcomes:* Write your outcomes at the top of the plan and refer to them often.
- *Chunk time:* Break long lessons into smaller segments (10–15 minutes) with shifts in activity.
- *Vary methods:* Use a mix of explanation, discussion, practice, and feedback to support different learning styles.
- *Plan for interaction:* Build in opportunities for students to talk, think, and apply ideas.
- *Anticipate difficulties:* Identify where students may struggle and plan supports (examples, visuals, guiding questions).
- *Prepare closure:* End with a summary, reflection, or question that connects the lesson to what comes next.

▶ Try This:

Take a lesson you already teach. Ask yourself:

1. What is the main outcome for this lesson?
2. How will I know students achieved it?
3. Do all my activities clearly connect to that outcome?
4. Where could I add an opportunity for feedback, reflection, or practice?

Write down one small change you could make to strengthen alignment and engagement in that lesson.

Lesson Plan Frameworks

Lesson plan frameworks provide a structure for teaching. They help ensure that lessons are purposeful, balanced, and connected to learning outcomes. Frameworks are not rigid scripts but flexible models you can adapt to your subject and teaching style.

Common Frameworks

Launch – Explore – Summarize

- ***Launch****:* Capture attention, introduce purpose, and connect to prior knowledge.
- ***Explore:*** Engage students in active learning through discussion, practice, or application.
- ***Summarize****:* Draw the class back together, highlight key takeaways, and connect to what comes next.

  Example: In a history class, begin with a provocative question ("Was this revolution inevitable?"), have students analyze primary sources in groups, and then summarize by comparing interpretations.

BOPPPS Model (Bridge, Outcomes, Pre-assessment, Participatory Learning, Post-assessment, Summary)

- This model is widely used in college teaching. It emphasizes starting with a "bridge-in" (hook or story), sharing outcomes, checking prior knowledge, engaging students in participatory activities, assessing learning during and after, and closing with a summary.
  Example: In a nursing class, bridge-in with a patient case, state the outcomes, check what students already know about symptoms, involve them in a role-play assessment, and end by summarizing diagnostic steps.

Gagné's Nine Events of Instruction

- Gain attention, inform learners of objectives, stimulate recall, present content, provide guidance, elicit performance, give feedback, assess performance, and enhance retention.
- This model is useful across disciplines because it provides a clear structure for guiding students from initial engagement to practice, feedback, and long-term retention.

Example: The instructor starts with striking images of polluted waterways (Gain attention), outlines the goal of analyzing water quality indicators (Inform objectives), and asks students what they already know about pH, nitrates, and dissolved oxygen (Stimulate recall). The instructor then explains how each factor affects ecosystems (Present content) and provides a step-by-step guide for testing samples (Provide guidance). Students conduct water tests in small groups (Elicit performance) and receive feedback on their methods (Provide feedback). Each group submits lab results for evaluation (Assess performance) and reflects on how the testing process could be applied to different environmental contexts (Enhance retention).

5E Model (Engage, Explore, Explain, Elaborate, Evaluate)

- Often used in science and experiential learning.

Example: In a physics class, begin with a puzzling demo (Engage), let students experiment with materials (Explore), explain underlying concepts (Explain), extend to new situations (Elaborate), and assess understanding (Evaluate).

Direct Instruction

- A structured, teacher-led model often used when introducing new knowledge or skills.
- Follows a clear sequence: state objectives, model the skill or concept, provide guided practice, give feedback, and move to independent practice.

Example: In a mathematics class, the instructor demonstrates solving equations step by step, then guides students through practice problems before asking them to solve new problems independently

Framework	Main Stages	Best For
Basic	1. Introduction 2. Main Activity 3. Closure	Adaptable to most contexts
5E Model	1. Engage 2. Explore 3. Explain 4. Elaborate 5. Evaluate	Best for concept heavy or inquiry-based lessons.
BOPPPS	1. Bridge-In 2. Outcomes 3. Pre-Assessment 4. Participatory Learning 5. Post-Assessment 6. Summary	This is ideal for interactive classes especially when using active learning sessions that include group work, case studies or simulations
Gagné's Nine Events	1. Gain Attention 2. State Objectives 3. Recall Prior Learning 4. Present Content 5. Provide Guidance 6. Elicit Performance 7. Provide Feedback 8. Assess Performance 9. Enhance Retention & Transfer	This works really well for structured lessons with clear progression from theory to practice.
Direct Instruction (Hunter)	1. Objectives 2. Anticipatory Set 3. Input 4. Modeling 5. Checking Understanding 6. Guided Practice 7. Independent Practice 8. Closure	Best for any situation that focuses on step-by-step instruction where you require students to follow and model the instructions.

Strategies for Using Frameworks

- ***Pick one and adapt****:* Start with a model like BOPPPS or 5E and adapt it rather than reinventing the structure.
- ***Stay flexible****:* Use the framework as a guide, but adjust timing and flow depending on student needs.
- ***Mix methods****:* Combine elements from different frameworks (e.g., Launch–Explore–Summarize within BOPPPS).
- ***Keep outcomes visible****:* Make sure each stage of the framework connects back to your learning outcomes.

Try This:

Take an upcoming lesson you plan to teach.

1. Choose one framework (e.g., Launch–Explore–Summarize, BOPPPS, Gagné, 5E).
2. Sketch out how your lesson would look if you used that framework.
3. Compare it to your original plan—what new opportunities for engagement or clarity emerge?

Once you have chosen a framework, a **lesson plan template** can make the planning

Lesson Plan Template

A lesson plan template provides a consistent format for organizing your teaching. Templates make planning more efficient, help you focus on alignment, and ensure you do not overlook essential elements. They also make it easier to share your plans with colleagues or adapt them in the future.

Common Components of a Lesson Plan Template

- ***Learning Outcomes***

  What students should be able to do by the end of the lesson.
- ***Prior Knowledge***

  What students need to know or be able to do before this lesson.
- ***Materials/Resources***

  What you and your students will need (handouts, slides, tools, technology).
- ***Introduction/Bridge***

  How you will capture interest and connect to prior learning.
- ***Teaching and Learning Activities***

  The sequence of activities, with timing and methods noted.
- ***Assessment/Evidence of Learning***

  How you will check that students are meeting the outcomes during and after the lesson.

- ***Closure***

  How you will consolidate learning, highlight key takeaways, and connect to future lessons.
- ***Notes/Reflections***

  Space for you to record how the lesson went and what to change next time.

Example: Excerpt from a Lesson Plan Template

- ***Outcome:*** Analyze the impact of climate change policies on local communities.
- ***Prior Knowledge:*** Students have completed readings on international climate agreements.
- ***Activities:***
  - 10 min—Review key principles of climate policy (instructor-led).
  - 15 min—Small group activity: compare case studies of two communities.
  - 15 min—Whole class discussion: What challenges and opportunities did you notice?
- ***Assessment:*** Students submit a short reflection identifying one policy impact and justifying its significance.
- ***Closure:*** Instructor summarizes themes and previews the next class on adaptation strategies.

Strategies for Using Templates

- ***Use consistently:*** Planning with the same template saves time and helps you refine lessons across a course.
- ***Keep outcomes visible:*** Place outcomes at the top of the template so they guide the rest of the plan.
- ***Plan for timing:*** Estimating time for each activity helps ensure balance and realistic pacing.
- ***Leave space for flexibility:*** Add notes for alternate activities or adjustments if needed.

You can use two different checklists at different stages of planning. The first offers guiding questions for designing your lesson, while the second is a quick reference for reviewing your plan before you teach**.**

Design Stage

Checklist: Planning What Matters Most in Your Lesson *(Worksheet Style)*

Use these guiding questions to shape your lesson design. Leave space to jot down notes or ideas under each prompt.

1. Are the key learning outcomes clear and achievable?

   What do I want students to understand or be able to do by the end of the lesson?

   Notes: _____

2. What are the core concepts?

   How will I highlight and reinforce them?

   Notes: _____

3. What content might be especially difficult to understand?

   How will I recognise when students are struggling, and what will I do to support them?

   Notes: _____

4. What examples, illustrations, or analogies will help clarify the main ideas?

   How can I make complex or abstract points more concrete?

   Notes: _____

5. Where can I build in opportunities for student participation?

   How will I keep learners actively involved and thinking?

   Notes: _____

6. What are quick ways I can check for understanding during the lesson?

   (e.g., questions, thumbs up/down, pair-share, mini quizzes)

   Notes: _____

7. How will I connect different parts of the lesson so that it flows smoothly?

   What transitions will help the lesson flow?

   Notes: _____

8. Which parts of the lesson will likely interest students?

   What might they find less engaging—and how can I keep them involved?

   Notes: _____

9. Is the timing realistic?

   How will I pace the lesson to ensure there's enough time for key learning and reflection?

   Notes: _____

📋 Final Check

Checklist for Reviewing Your Lesson Plan *(Quick Reference Style)*

Use this shorter checklist as a final review before teaching.

- ☐ Are the outcomes clear and achievable within the time available?
- ☐ Do the activities directly connect to the outcomes?
- ☐ Is there a balance of explanation, practice, and feedback?
- ☐ Are transitions between activities clear to both you and your students?
- ☐ Is the timing realistic for the planned activities?
- ☐ Does the plan allow for flexibility if students need more or less time?
- ☐ Have you included an opportunity for reflection or self-assessment?

Example of Applying the Checklist

Suppose you plan a lesson where students evaluate two contrasting news articles.

- ***Outcome:*** Evaluate the credibility of online sources to justify conclusions about a claim.
- ***Planned activities:***
  - o 10 min—Review criteria for evaluating sources.
  - o 20 min—Group comparison of two articles making different claims.
  - o 10 min—Class discussion on which article is more credible and why.
- ***On review with the checklist:***
  - o Timing looks tight for group comparison → adjust to 25 minutes.
  - o Closure is missing → add a 5-minute wrap-up where students share one strategy they will apply in future research.

This small review makes the lesson more realistic and complete.

Strategies for Using the Checklist

- Build it into planning: Use the checklist as the final step before teaching.
- Use it for peer review: Share your plan with a colleague and ask them to review it.
- Reflect afterward: Revisit the checklist post-lesson and note where adjustments were needed.
- Adapt it: Modify the checklist to suit your teaching style or subject.

▶ Try This:

Choose one of your upcoming lessons and walk through this checklist.
Jot down 2–3 small changes you could make to better highlight key concepts, support struggling students, or increase engagement. Try out one change and reflect afterward on what worked.

Designing lessons means clarifying outcomes, sequencing key concepts, and aligning activities with assessment. Careful planning creates a blueprint for learning that is intentional and achievable**.**

➡ Next Steps

Once the design is in place, the next question is: *How will you and your students know whether the intended learning has happened?*

In **Part 4**, we focus on assessing learning—designing assessments that align with outcomes, make expectations transparent, and provide meaningful feedback.

Part 4: Assessing Learning

Assessment is how we find out what students have learned and how we can support their progress. It is more than assigning grades—it is the process of gathering evidence of learning, giving students feedback, and helping them improve. When designed thoughtfully, assessment provides clarity, motivates students, ensures fairness, and guides teaching.

This section focuses on the key aspects of assessment design:

- **Assignment Planning** – aligning assessment with learning outcomes
- **Clear Assignment Instructions** – making expectations transparent
- **Grading Criteria** – ensuring fairness and consistency
- **Feedback** – guiding students toward improvement

A variety of approaches and tools are introduced so you can design assessments that are meaningful, inclusive, and aligned with learning outcomes. We also consider how assessment practices are evolving in the age of AI.

Assessment is the foundation of fair and effective teaching. It provides evidence of learning, helps students see their progress, and allows instructors to adjust their teaching. A balance of approaches offers a fuller, more accurate picture of learning.

The Assessment Cycle

Assessment is not a one-off event but a continuous cycle:

1. **Clarify outcomes** – What should students learn?
2. **Design assessment** – What task will show this learning?
3. **Communicate instructions** – How will students know what to do?
4. **Provide criteria** – What does quality look like?
5. **Give feedback** – What's working and what can improve?
6. **Revise and try again** – Students use feedback to extend learning

This cycle reminds us that assessment is ongoing, dynamic, and most effective when feedback is acted upon.

Types of Assessment

- **Diagnostic Assessment** – before instruction. Identifies prior knowledge, misconceptions, or gaps to help tailor teaching.
- **Formative Assessment** – during learning. Provides feedback to both student and teacher; usually low-stakes (e.g., exit tickets, polls, peer feedback).
- **Summative Assessment** – after learning. Evaluates achievement at the end of a lesson, unit, or course; often higher-stakes (e.g., projects, exams, presentations).
- **Self-Assessment** – students reflect on their own work using checklists, rubrics, or prompts. Builds responsibility, self-awareness, and metacognition.
- **Peer Assessment** – students provide feedback on each other's work against clear criteria. Builds critical thinking and clarifies what quality looks like.

Low- and High-Stakes Balance

Effective courses blend frequent **low-stakes tasks** (quizzes, reflections, in-class polls) with fewer **high-stakes assignments** (final projects, exams). This balance reduces pressure, builds confidence, and allows multiple ways to demonstrate learning.

Assessment Methods

Method	Examples
Traditional	Quizzes, essays, tests, research papers
Alternative	Portfolios, podcasts, presentations, peer assessments
Authentic	Real-world tasks such as case studies, projects, interviews, demonstrations

A combination of methods across a course provides the clearest picture of student learning.

Example Alignment Table

To help you plan your assessment, you can use the table below and the Wheel on the next page:

Learning Outcome	Assessment Type	Method	Weighting (% out of 100)
Apply the principles of conflict management in a professional setting	Formative	Group role-play of workplace conflict with checklist-based feedback	Ungraded

Student Involvement

Where possible, involve students in shaping assessment. Examples include:

- Co-creating rubrics
- Negotiating project formats
- Choosing from a menu of assignment options

These practices increase motivation, inclusivity, and ownership of learning.

Assignment Planning

Assignments should allow students to demonstrate learning in relation to outcomes. They should be **aligned**, **authentic**, **scaffolded**, **varied**, and **feasible**.

Key Principles

- ***Alignment*** – link each task directly to outcomes
- ***Authenticity*** – mirror real-world or professional practices
- ***Scaffolding*** – break larger tasks into smaller stages (proposal → draft → reflection → final)
- ***Variety*** – use multiple formats (essays, labs, simulations, digital projects)
- ***Feasibility*** – keep workload realistic for both students and instructors

Examples

- ***Science*****:** Design an experiment on enzyme activity; submit lab report + analysis
- ***Arts*****:** Create a performance piece on identity with an accompanying reflection essay

▶ Try This:

- What assignment best demonstrates one outcome in your course?
- How could you increase authenticity or scaffolding?
- Could students choose between formats?

Checking Alignment with Bloom's Taxonomy

The Bloom's Taxonomy **Verbs to Assessment Table** connects outcomes, verbs, and assessment types. It helps ensure that your tasks are measuring the intended level of learning rather than staying at surface-level recall. By reviewing your outcomes alongside this table, you can check whether the verbs and assessments you choose truly reflect the depth of learning

Bloom's Taxonomy – Verbs with Sample Assessments

Level	Sample Verbs	Aligned Assessments / Tasks
Remembering	define, list, identify, recall, label, state	Multiple-choice quiz, flashcards, matching exercise, fill-in-the-blank, short factual questions
Understanding	describe, explain, summarize, classify, interpret, illustrate	Short answer questions, concept maps, annotated diagrams, summaries, explanation of a process
Applying	apply, demonstrate, use, implement, calculate, solve	Problem sets, case studies, role-play, lab tasks, applying formulas, practical demonstration
Analyzing	analyze, differentiate, examine, categorize, compare, investigate	Compare/contrast essay, data analysis, critique, debate, flowcharts showing relationships
Evaluating	evaluate, assess, judge, justify, defend, recommend, critique	Position paper, peer review, opinion essay, oral defense, structured debate, reflective critique
Creating	create, design, develop, construct, compose, invent, propose	Research project, multimedia presentation, business plan, prototype, creative writing, capstone

Ask before finalizing an assignment:

- What outcome is this assessing?
- Does the task give students a fair chance to show learning?
- Are expectations around AI and academic integrity clear?

Flexibility and Scaffolding

- **Flexibility**: Whenever possible, offer students options (e.g., a reflection as text or a recorded presentation). Flexibility promotes inclusivity and autonomy.
- **Scaffolding**: Break larger tasks into smaller stages (proposal → draft → feedback → final). Provide interim check-ins and ensure feedback comes early enough to matter.

▶ Try This:

Review an Assignment with a Colleague

Choose one assignment and review it with a peer. Ask:

- Is the assessment aligned with outcomes?
- Does it measure intended learning?
- Does it prepare students for future challenges?
- Are expectations about AI clear and fair?

Writing Clear Assignment Instructions

Students succeed when they understand exactly what's expected.

📋 Checklist for Clarity

- ☐ State the purpose (why it matters)
- ☐ Describe the task step by step
- ☐ Provide format, length, and submission details
- ☐ Specify criteria for success, linked to outcomes
- ☐ Highlight resources and supports (including AI expectations)
- ☐ Indicate weighting in the final grade

Example
Instead of: *"Write a paper on climate change."*
Better: *"Write a 1,500-word paper analyzing one policy response to climate change.*

Describe the policy, analyze its effectiveness, and support your argument with at least three scholarly sources. Submit as Word or PDF by March 15."

Try This:

Review one assignment description—would students know exactly what to do and how they will be graded?

Designing Your Grading Criteria

Grading criteria clarify how student work will be evaluated. When shared in advance, they help students understand expectations, reduce anxiety, and improve the quality of submissions. For instructors, they support consistent, transparent, and fair assessment.

Grading criteria are often presented in the form of a rubric, a tool that tells the students what you are looking for and what they need to do to obtain a good grade.

Why use a rubric?

A well designed rubric helps you to:

- **Make grading fair and consistent.** A rubric provides clear criteria, so different teachers—or the same teacher on different days—are more likely to assign consistent marks. It also ensures that students are evaluated based on the criteria, not by comparing their work to others.

- **Provide meaningful feedback that supports student learning.** Instead of just assigning a score or letter grade, a rubric shows why a student earned that result. It highlights strengths and points out areas for improvement, giving students a clearer sense of what they can do to improve.
- **Clarify the expectations of the assignment.** Rubrics describe what is required to meet different levels of performance. This helps students understand what is expected—especially for complex tasks like essays, presentations, or group projects.

- **Support transparency and fairness.** When students understand how their work will be assessed, it reduces confusion and makes grading feel more equitable. It also gives all students, regardless of background or prior experience, a clearer starting point.

Types of Rubrics – Compared

Rubric Type	When to Use It	Advantages	Limitations
Checklist	For simple assignments or early-stage tasks	Quick to create, good for self-checks	Doesn't provide feedback on quality
Holistic	When you're evaluating the whole product at once	Fast to use, especially for familiar tasks	Less useful when feedback on specific criteria is needed
Rating Scale	When you want to assign scores across several criteria	Combines structure with numerical values	Lacks clarity if performance levels aren't well defined
Analytic	For complex tasks where you want to give targeted feedback	Provides detail and clear expectations	Takes time to create; some work may not fit neatly in boxes

Checklist

A checklist is a simple list of things students need to do or include in an assignment. It can be a great starting point before creating a full rubric. For straightforward tasks, a checklist may be all you need to give feedback or help students check their own work.
Students can even use the checklist themselves—marking off each step as they complete it and submitting it along with their assignment.

Example: Driving Skills Checklist

- Applies driving regulations to situations on the road correctly
- Anticipates the actions of other drivers
- Steers smoothly and controls speed accurately
- Uses indicators correctly and in good time
- Recognizes and obeys all traffic signs and signals
- Observes pedestrian crossings and gives way when needed
- Proceeds through intersections safely and correctly
- Performs maneuvers such as evasive steering and emergency braking

Holistic Rubric

Points	Description
5	Strong understanding with minor errors that do not reflect conceptual gaps
4	Mostly correct with some non-trivial gaps in reasoning
3	Partial understanding; incomplete or off-track work
2	Limited understanding; some relevant ideas, but poorly applied
1	Misunderstands the task; no meaningful attempt to solve
0	No response or entirely off-topic

Analytic Rubric Example (Written Reflection)

Criterion	Excellent (2)	Developing (1)	Not Demonstrated (0)
Responds to the Prompt	Fully addresses all aspects of the question	Addresses the prompt but with limited depth	Does not respond clearly or goes off-topic
Uses Evidence	Supports ideas with relevant examples or details	Some examples used but may be vague or underdeveloped	No supporting examples or unclear connections
Organization	Ideas are well-structured and easy to follow	Some organization, but flow may be inconsistent	Disorganized or difficult to follow
Clarity and Mechanics	Clear writing with minimal errors	Writing is understandable with some errors	Frequent errors that interfere with meaning

Tip: Use *this kind of rubric when you want to assess multiple dimensions of a student's work and provide targeted feedback.*

Rating Scale Example (Group Presentation)

Criterion: Delivery and Engagement

Did the group speak clearly, stay within time, and keep the audience engaged?

1 (Not at all) – 2 – 3 – 4 – 5 (Very effectively)

Tip: Rating *scales like this are useful when you need to give a quick evaluation on one element of performance, especially in presentations, peer assessments, or class participation.*

	When use it?	Advantages	Disadvantages
Checklist	Simple assignment	Quick to create, don't need standards	Provides information on what's there, but not on the quality
Holistic	Want to treat the assignment holistically. To earn an A or B, all these criteria need to be met.	Quick to use if the rubric fits the assignment well.	Sometimes student work doesn't fit the holistic description, and it's useful to have a finer breakdown.
Rating Scale	Want a numerical measure that is analytical. A scale for several different criteria.	Combine description with numerical scale, which provides more analysis to students.	The points on the scale don't have descriptive "anchors." What does a 5 mean? A 2?
Analytic	Seek to analyze student work and give detailed, descriptive feedback. Each score has a clear description.	Don't have to repeat the same comments to students. Just mark on the rubric. Provides students with detailed feedback on their work.	Time consuming to create. Some good student learning doesn't fit the boxes. Leave some room for flexibility.

How to Create Your Own Rubric

Simple Steps to Get Started

1. ***Choose one assignment***
   Think of a task you often assign—such as a presentation, short paper, or project.

2. ***Turn your notes into clear criteria***
   Write each expectation as a performance statement.
   a) Use wording like: *"Students will…"*
   b) List these in the left-hand column of your rubric
   c) Decide whether all parts carry equal weight

3. ***Describe levels of performance***
   Define what excellent work looks like (your top level). Then sketch out what developing or minimal work might include. You can refine mid-levels later based on real student submissions.

Tip: Rubrics improve with use. Start with draft language and adjust based on how students respond.

Questions to Guide Your Rubric Design

Use these to shape a rubric that supports both learning and clarity:

- How will this rubric help students learn—not just earn a grade?
- Do you have examples of past student work to guide your descriptions?
- How much support do students need with this task?
- Could students co-create or revise the rubric with you?
- Will the rubric allow for creativity or open-ended responses?
- Are your descriptions and terms clear to students in your field?
- How many levels of performance are useful?
- Do all criteria carry equal weight, or should some matter more?
- Is there room for exceptional work that doesn't fit perfectly in the boxes?

Giving Effective Feedback

Once you've designed your grading criteria, the next step is to consider how you will communicate your assessment in ways that help students learn and improve. Feedback is most helpful when it is clear, specific, timely, and actionable.

Rather than just justifying a grade, feedback can guide students toward deeper understanding and more confident performance in future tasks.

What Makes Feedback Effective?

- Clear – Uses simple, direct language
- Specific – Points to particular strengths or areas for improvement
- Actionable – Offers concrete suggestions students can use
- Balanced – Recognizes what is working, not just what needs fixing
- Timely – Arrives soon enough for students to apply it to their next attempt

Feedback is most powerful when students can act on it while they still care about the work.

Using Rubrics as Feedback Tools

Rubrics are not only for assigning scores. They are also:

- Show students what matters in the task
- Highlight where they are doing well and where they can grow
- Make instructor expectations more transparent
- Help standardize feedback across students or sections

You can give feedback directly in the rubric by:

- Highlighting performance levels
- Adding short comments beside each criterion
- Asking students to reflect on the rubric results and identify next steps

Examples of Feedback Language

These examples show the *type of feedback language* you might use depending on what you are commenting on. Categories such as clarity, depth, accuracy, structure, or next steps can be used **at any stage of learning**. The important part is to make your comments timely and actionable so that students can respond to them.

Focus Area	Sample Feedback	Why This Helps
Clarity	"Your central idea is clear. Consider revising the final paragraph to make the conclusion stronger."	Helps students sharpen their message or argument.
Depth	"You've identified key points. Try expanding your analysis with one more example."	Encourages deeper thinking and richer support.
Accuracy	"The first two steps are correct. In Step 3, double-check how you applied the concept."	Corrects errors before they become fixed habits.
Structure	"Each section is well organized. You could improve the flow with clearer transitions."	Strengthens the overall organization and readability.
Next Steps	"You're on the right track. Next time, focus more on connecting your ideas to the evidence."	Points forward, showing how learning can transfer to the next task.

Try This:

Test Your Rubric and Feedback with a Colleague

Choose one assignment and draft a simple rubric for it. Then:

1. **Swap sample work** with a colleague (real or fictional examples).
2. **Use your rubric** to assess the sample.
3. **Write brief feedback** based on the rubric.
4. **Compare notes**: Did your rubric help you identify what to praise and what to suggest improving? Was your feedback clear and useful?

This activity helps you check whether your rubric descriptions make sense, and whether the feedback it generates is helpful to students. It's a simple way to catch confusing criteria or unclear expectations before students see them.

Assessment in the Age of AI

Generative AI is reshaping assessment. While it raises concerns about plagiarism, it also offers opportunities if integrated thoughtfully.

Key Considerations

- ***Authenticity*** – focus on tasks requiring creativity, context, or lived experience
- ***Process over product*** – value drafts, reflections, and in-class work
- ***Transparency*** – be explicit about when AI use is allowed or prohibited
- ***Future skills*** – help students critically evaluate and improve AI outputs

Strategies for AI-Resilient Assessment

- Require multi-stage assignments (drafts, check-ins, oral defense)
- Ask students to critique AI outputs
- Combine authentic and traditional methods
- Use case-specific, personal, or real-world contexts

Example
Instead of: *"Write a research paper on climate change."*
Try: *"Use an AI tool to generate a draft policy summary. Critique its accuracy, identify gaps, then revise it into a final version with scholarly sources."*

Pulling It All Together
Assessment, instructions, criteria, and feedback are strongest when aligned. Students should always see the connection between:

- What they are asked to do
- How they will be evaluated
- How they can improve

In today's context, this also means designing assessments that account for AI use, encourage integrity, and emphasize authentic learning.

Final ▶ Try This:

Assessment Design Challenge
Pick one outcome from your course. Design a cycle:

1. **Outcome** – What do you want students to achieve?
2. **Assignment** – What task will demonstrate this?
3. **Instructions** – How will you communicate expectations?
4. **Criteria** – How will you ensure fairness and clarity?
5. **Feedback** – How will you guide improvement?
6. **AI** – How might students use AI responsibly in this task?

➡ Next Steps

Assessment shows whether learning has happened. In **Part 5: Active Learning**, explore instructional approaches and methods you can use to engage students, build motivation, and create a strong sense of belonging

Part 5: Engaging Students in Active Learning

Teaching isn't only about planning lessons and assessments. It's about what happens in the classroom: how students respond, participate, and take ownership of their learning. Active learning begins with creating the conditions for **student engagement**.

Supporting Student Engagement

Engagement goes beyond attendance. It includes students' curiosity, interest, participation, and willingness to invest effort in their learning. When students are engaged, they aren't just receiving information—they are questioning, discussing, and actively making sense of ideas.

Ways to Support Engagement Through Your Teaching

- ***Make learning relevant*** – Connect lessons to real-world contexts, current events, or students' own goals and experiences.
- ***Encourage active participation*** – Use strategies that invite students to solve problems, share ideas, or reflect. Keep them doing, not just listening.
- ***Create a supportive environment*** – Engagement grows when students feel safe, respected, and included. Build trust, encourage collaboration, and welcome questions.
- ***Provide appropriate challenge*** – Stretch students just beyond their current level. Frame mistakes as part of learning and support perseverance.
- ***Offer feedback and space to reflect*** – Feedback helps students improve. Give them chances to self-assess, ask questions, and set goals.

Engagement is not an "extra" task. It is embedded in how you design and deliver your teaching.

▶ Try This:

Look at one of your upcoming lessons. Identify a point where students are most likely to lose focus. Plan one small adjustment—such as adding a discussion question, a real-world example, or a short reflection—to re-engage them at that moment.

Choosing What Fits

Once you've thought about broad ways to support engagement, the next step is to decide **which instructional strategies** fit your context. Matching your strategy to your outcomes is an important starting point. Your choices are also shaped by class size, available time, course format, and your own preferences.

Strategy	What it involves	Example
Experiential Learning	Learning through real or simulated experience, followed by structured reflection	Role-playing a scenario and discussing the outcomes and decisions involved
Problem-Based Learning	Students work on open-ended, real-world problems without a predefined solution	Investigating a public health issue and recommending a course of action
Inquiry-Based Learning	Students explore questions or problems and develop their understanding through investigation	Designing an experiment to answer a scientific question
Project-Based Learning	Students complete a substantial task that results in a product or presentation	Creating a campaign, report, or exhibition based on a real challenge
Case-Based Learning	Students analyze and discuss real or fictional scenarios to apply course concepts	Exploring a workplace ethical dilemma using course frameworks
Collaborative Learning	Students learn together by working in pairs or groups to build understanding or complete tasks	Peer reviewing each other's work or co-authoring a response
Research-Based Teaching	Teaching is grounded in current research and includes opportunities for students to explore scholarly methods	Analyzing recent findings in the field or comparing approaches to a key issue

The strategies in the table show the range of ways you can design for engagement, from experiential projects to collaborative problem-solving. But what do these approaches look like in day-to-day teaching?

Active Learning

Active learning shifts the focus from what the teacher explains to what students do. Instead of passively listening, students engage with the material by discussing, applying, analyzing, or reflecting. This section introduces strategies you can use in almost any lesson—from quick activities that take only a few minutes, to structured approaches like interactive lecturing and cooperative learning, to redesign models such as the flipped classroom. By the end, you will have a toolkit to make your classes more engaging and inclusive, whether you are teaching in person, online, or in a blended format.

Examples of Quick Strategies

- Think–pair–share: students reflect individually, discuss in pairs, then share with the class.
- One-minute papers: students write a quick response to a question to consolidate understanding.
- Polling or quizzes: instant checks of comprehension, with or without technology.
- Muddiest point: students write down what was most confusing in a lecture or reading.
- Case snippets: mini real-world examples that students analyze briefly.

Try This:

Review one of your lessons. Where could you pause to let students do something with the content? Add a brief check-in, question, or problem-solving activity.

Once you begin to see the benefits of these quick strategies, you may want to adopt structured approaches that embed interaction more deliberately into your teaching.

Interactive Lecturing

If you use lectures—whether often or occasionally—there are simple ways to make them more engaging and effective. That's where interactive lecturing comes in.
Lectures remain one of the most common ways to teach in higher education. They're useful for organizing content and reaching many students at once. But long, uninterrupted lectures can lead to disengagement, especially when students are expected to passively absorb information.

One problem with conventional teaching lies in the presentation of the material. Frequently, it comes straight out of textbooks and/or lecture notes, giving students little incentive to attend class. The traditional presentation is nearly always delivered as a monologue in front of a passive audience, which compounds the problem. Only exceptional lecturers are capable of holding students' attention for an entire lecture period. It is even more difficult to provide adequate opportunity for students to critically think through the arguments being developed. Consequently, lectures can reinforce students' feelings that the most important step in mastering the material is memorizing a zoo of apparently unrelated examples.

Eric Mazur, Harvard professor: Peer Instruction Research

Reflect on Your Lecturing Style

How do you usually conduct lectures?

- Do you tend to present information for most of the session?
- Do students have opportunities to ask questions, discuss ideas, or try things out during class?

Take a moment to jot down a few notes about your current style. This will help you see where interactive elements might fit naturally.

Why Use Interactive Lectures?

- Encourages active participation rather than passive note-taking
- Helps maintain focus and motivation
- Allows immediate feedback—for both students and instructors
- Supports deeper understanding and long-term retention
- Invites more students into the learning process, helping to close achievement gaps

What It Looks Like

Instead of lecturing for a full hour, the instructor breaks the session into shorter segments—10 to 15 minutes—followed by an activity. These might include:

- A question for discussion or polling
- A quick write or reflection
- A pair-share or small group conversation
- A short quiz or practice question

This cycle of brief instruction and immediate engagement helps students stay involved and gives you a clearer sense of how learning is progressing.

Example (90 minutes):

5 min: Introduction and Learning Outcomes
15 min: First Lecture Segment
10 min: Think–Pair–Share activity
20 min: Second Lecture Segment
10 min: Quiz (3 questions) via a digital tool, addressing false responses
15 min: Third Lecture Segment
10 min: Collaborative case study based on the third lecture segment
5 min: Wrap Up and Homework

Why It Works

- Helps students maintain attention and process information in smaller chunks
- Provides feedback on whether students are following
- Encourages active participation even in large classes

Strategies for Interactive Lecturing

- Pause for questions every 10–15 minutes
- Think–pair–share with a focused question
- Worked examples: demonstrate, then give a parallel problem
- Mini case study: analyze a short scenario mid-lecture
- Polling: use technology or hand-raising to check comprehension

Try This:

Choose one place in a lecture where students often lose focus. Add a short activity, question, poll, or mini problem. Even small shifts, like adding a poll or a pair-share, can make your lectures more active and effective.

The Flipped Classroom

The flipped classroom is a teaching approach that reverses the traditional flow of instruction. Instead of introducing new content during class and assigning practice as homework, students first engage with new material on their own. Class time is then used for discussion, application, and feedback.

This model shifts the instructor's role from information deliverer to learning facilitator. It creates space for more active engagement and timely support during class—but it also requires careful planning to work well.

What Does "Flipping" Look Like?

In a flipped approach:

- Students review new content before class through videos, readings, podcasts, or guided online modules.
- Class time focuses on interaction, practice, and feedback—not on delivering lectures.
- You use class time to check understanding, answer questions, work through problems, or facilitate discussion.
- Students may have more opportunities to learn from peers and receive support while they practice.

Flipped Classroom: Pros and Considerations

Benefits	Considerations
More time in class for application, discussion, and feedback	Students may not complete pre-class preparation
Encourages active learning and deeper engagement	Pre-class materials must be clear, focused, and accessible
Helps identify misconceptions earlier	Not all students are familiar with this model and may need support adjusting
Promotes student responsibility and self-direction	Requires reliable access to technology and time outside of class
Facilitates more individualized or small-group support	Preparing quality pre-class materials can be time-consuming

When Flipping Works Well

You might consider flipping part of your course if:

- Students need more time in class for practice or feedback
- You consistently run out of time for important applications or discussions
- You're preparing students for a major project or assessment
- Students often struggle with specific concepts or skills
- You are teaching in a hybrid or blended format

Getting Started

You don't need to flip an entire course. Try flipping a single class or topic first.

Start by asking:

- What do students need time to practice in class?
- What content can they reasonably engage with on their own?
- How can I check whether they've prepared, and support those who haven't?
- Keep pre-class materials short, focused, and clearly connected to in-class work. Begin class with a quick review or prompt that helps you gauge preparation and address gaps before moving forward.

Example:

Before class: Students watch a 10-minute video on a key concept

During class: Students work in small groups to apply the concept to a case study

After class: Students complete a short individual reflection or quiz

▶ Try This:

Flipping isn't always easy—especially at first. Choose one topic or lesson you already teach. Instead of introducing the material in class, create a short pre-class task—such as a short video, reading, or podcast episode. In class, plan an activity that helps students apply or discuss the content.

Ask yourself:

- What will I ask students to do before class?
- How will I check that they engaged with the material?
- What will I do during class that builds on their preparation?

After trying it, reflect on what worked, what students responded to, and what you might adjust next time.

Tip: Even flipping one part of a lesson can help students build stronger learning habits and make better use of class time.

Cooperative Learning

When students work together, they can strengthen understanding and build essential skills. But not all group work leads to learning. Cooperative learning provides a structured approach that makes

collaboration purposeful, equitable, and ensures that every student participates actively, remains accountable, and learns from others.

Working in groups can be powerful, but not all group work leads to learning. **Cooperative learning** is a structured approach that makes group work purposeful and equitable.

Group Work vs. Cooperative Learning

- **Group Work**: students work together, but roles and accountability may be unclear. Some students contribute more than others.
- **Cooperative Learning**: tasks are designed so that all members must participate and learning depends on shared effort.

Key Features of Cooperative Learning

- ***Positive interdependence****:* the group succeeds only if everyone contributes.
- ***Individual accountability****:* each member has a role.
- ***Face-to-face interaction****:* students explain and challenge each other.
- ***Group processing****:* reflection on teamwork.
- ***Interpersonal skills****:* communication, conflict resolution, and listening.

Making Group Work Effective

1. ***Define clear goals*** and expected products.
2. ***Assign roles*** (facilitator, recorder, timekeeper, presenter).
3. ***Set time limits*** to keep groups focused.
4. ***Assess both group product and individual effort.***
5. ***Debrief afterward*** so students reflect on process and outcome.

Examples

- ***Biology****:* groups design an experiment, with each student responsible for a step.
- ***Business****:* roles assigned for analyzing and presenting a case.
- ***Literature****:* collaborative text annotation with discussion roles.

Try This:

Take an existing group activity. Add roles and specific outcomes, then have students reflect on what helped the group succeed.

Cooperative learning brings structure to collaboration, but sometimes the bigger challenge is **restructuring the use of class time**. That's where the flipped classroom comes in.

Motivation, Engagement, and Belonging

No matter the strategy, active learning is most powerful when students feel included and motivated.

Strategies

- Connect to real-world issues or student goals.
- Offer choices in activities or roles.
- Provide low-stakes participation opportunities.
- Acknowledge contributions publicly.
- Show explicitly how each activity connects to course outcomes.

Technology and Active Learning

Technology tools can enhance engagement when used purposefully.

Some strategies to try, include:

- Polling tools for instant feedback.
- Shared whiteboards or docs for brainstorming.
- Online discussions for quieter voices.
- AI tools for generating examples, practice questions, or simulations.

Caution: Always connect the tech back to outcomes—tools should enhance, not replace, participation.

Think of active learning as a spectrum. At one end are small, quick strategies (like a pause question or poll). In the middle are structured frameworks (like interactive lecturing and cooperative learning). At the far end are redesign models (like flipping a classroom). You don't have to transform everything at once—start small, build confidence, and gradually expand.

Next Steps

Engagement strategies bring lessons to life, but deeper learning requires reflection. In **Part 6: Deeper Learning and Reflection**, you'll learn strategies to help students consolidate knowledge, make connections, and reflect on their learning, while also reflecting on your own teaching practice and identifying next steps in your journey as a teacher

Part 6: Deeper Learning and Reflection

Active learning engages students during lessons, but deeper learning comes from opportunities to consolidate knowledge, connect ideas, and reflect on growth. Reflection is valuable not only for students but also for teachers: by pausing to review what worked, what didn't, and what could be improved, we strengthen our own practice.

Learning does not end when a lesson or unit concludes. Students need opportunities to consolidate knowledge, make connections across concepts, and reflect on their growth. At the same time, teachers benefit from structured reflection on their own practice—what worked, what needs adjustment, and what to try next. This section offers strategies to support both student learning and your own professional growth.

Helping Students to Reflect on their Learning

Students often need structured opportunities to process and integrate what they've learned. Without these moments, knowledge can remain fragmented or surface-level. Reflection helps students deepen understanding, connect ideas, and develop metacognition—the ability to think about their own thinking.

Strategies to Support Student Reflection

- ***Pause for Synthesis:*** Build in short reflection breaks during or at the end of class where students summarize what they've learned.
- ***Exit Tickets:*** A one-minute written response such as:
  - *What was the most important idea from today?*
  - *What's still unclear?*
- ***Concept Mapping:*** Ask students to visually connect related ideas, showing relationships between concepts.
- ***Structured Journals or Logs:*** Students track learning over time, noting progress, questions, and insights.
- ***Application Prompts:*** Invite students to explain how they could apply what they learned in a new context.
- ***Peer Dialogue:*** Pair students to share their reflections and compare how they're making sense of material.

Reflection Prompts for Students

- What did I learn today that connects to something I already knew?
- Where did I get confused, and how did I work through it?

- How might I use this knowledge or skill in another class, in work, or in life?
- What strategies helped me learn best in this lesson?
- If I were to explain this topic to someone else, what would I emphasize?

▶ Try This (for Students)

Choose one topic from today's lesson:

1. Write a short explanation for a classmate who missed class.
2. Note one way this knowledge could be applied outside school.
3. List one question you still have.

💭 Reflection: Student Reflection Table

Reflection Prompt	My Notes
What was my biggest takeaway from this lesson/unit?	
Where did I struggle, and how did I address it?	
How does this learning connect to my goals or interests?	
What strategies worked best for me in this lesson?	
One action I will take next time to improve my learning is…	

Reflecting on Your Teaching

Just as students benefit from reflection, so do teachers. Regularly looking back on your teaching can highlight strengths, reveal patterns, and point to new directions for growth. Reflection doesn't have to be time-consuming—it can be built into your regular routine.

💭 Reflection: Prompts for Teacher Reflection

- Did the activities in this lesson align with the outcomes I set?
- Where were students most engaged? Where did they struggle?
- What evidence do I have that learning took place?
- If I taught this again, what would I change?
- How did I respond to unexpected challenges?

- Did my assessment and feedback help students grow?

Strategies for Reflection-in-Action and Reflection-on-Action

- ***Quick Notes After Class:*** Jot down one success and one change for next time.
- ***End-of-Week Review:*** Look across several classes—are there patterns in participation, confusion, or achievement?
- ***Peer Conversations:*** Discuss lessons with colleagues, exchanging insights and feedback.
- ***Student Feedback:*** Invite mid-course reflections from students about what helps them learn.
- ***Teaching Portfolios:*** Collect lesson plans, feedback, and reflections over time to track growth.

Try This (for Teachers)

Choose one lesson you've just taught. Write a short note under three headings:

- *What worked well?*
- *What could be improved?*
- *What will I try differently next time?*

Reflection: Teacher Reflection Table

Reflection Prompt	My Notes
Did my lesson activities align with outcomes?	
Where did students seem most engaged or confused?	
What evidence of learning did I observe?	
If I taught this again, what would I change?	
One specific teaching strategy I want to try next time is…	

Adjusting Your Teaching

Reflection isn't only something teachers do on their own. Gathering feedback from students while a course is still in progress provides valuable insight into how learning is unfolding. Acting on this feedback builds trust, improves the classroom climate, and helps avoid end-of-term surprises.

Why In-Progress Feedback Matters

- Students feel heard and valued.
- You can strengthen strategies that are working and adjust ones that aren't.
- Small mid-course changes can have a big impact on motivation and engagement.

When to Collect Feedback

- **Full-semester courses:** Around weeks 4–5, before midterms.
- **Half-semester courses:** Around week 3.

How to Collect Feedback

- **Keep it simple:** Focus on a few aspects you're willing to adjust (e.g., clarity, pacing, assignments).
- **Use online tools:** Anonymous surveys (e.g., MS Forms, Google Forms) encourage honest responses.
- **Set aside class time:** Give students 10–15 minutes so they aren't rushed.
- **Be transparent:** Tell students how you'll use their feedback and what constructive responses look like.

Sample Questions

Open-ended: What aspects of this course support—or hinder—your learning?

Choice: Is the course moving too quickly, too slowly, or just right?

Combination: "When you read or hear directions in this course, do you understand what's expected?" (Yes/No). If "No," ask for an example.

Analyzing Feedback

Sort into categories: pacing, assignments, clarity, materials.

Group into three lists:

1. What's working well.
2. Adjustments you can make now.
3. Concerns outside your control.

Responding to Students

- ***Acknowledge:*** Thank students and highlight key themes you noticed.
- ***Act:*** Explain what changes you will make and why.
- ***Clarify limits:*** Be transparent about suggestions you can't implement.
- ***Follow up:*** Check later to see if changes were effective.

Just-in-Time Feedback

In addition to mid-course surveys, you can gather **real-time feedback** during class with quick techniques (Angelo & Cross, 1993):

Minute Paper: At the end of class, ask students to jot down the most important thing they learned and one lingering question. Use these to clarify points in the next session.

Quick Polls: Use digital tools or hand-raising to instantly gauge understanding or opinions.

These immediate snapshots let you adjust pacing and focus on the spot.

Try This (Feedback)

Create a short (3–5 question) feedback survey for one of your courses.

Give students time in class to complete it.

Review results, make one small change, and explain to students how their feedback shaped your decision.

Reflection as a Cycle

Reflection should not be an add-on—it's part of the learning cycle. For students, it strengthens knowledge and skills; for teachers, it informs continuous improvement. When reflection becomes a habit, both teaching and learning become more intentional and connected.

Next Steps

Reflection brings the teaching and learning process full circle. You've explored planning, assessment, and active learning strategies. Now, use reflection to integrate these elements into a personal practice of growth.

As you continue using this workbook:

- Revisit your outcomes and lessons (Part 3).
- Review your assessments (Part 4).

- Experiment with active learning strategies (Part 5).
- Use reflection to connect all the pieces and plan your next steps as a teacher.

Closing Reflection

At the start of this workbook, you reflected on *who you are as a teacher*—your values, priorities, and identity. As you worked through the sections, you explored how to understand your students, design purposeful lessons, assess learning, engage students actively, and use reflection to keep improving. Taken together, these practices form a cycle: knowing yourself, knowing your students, planning intentionally, teaching responsively, and reflecting continuously.

Teaching is never finished—it's an ongoing process of learning, adjusting, and growing alongside your students. Use the tools and strategies in this workbook as starting points, adapting them to your context and discipline. Keep returning to the central question: *What matters most for my students' learning, and how can I bring that into my teaching today?*

Sources

The information in this workbook is grounded in our decades of experience designing, developing, and teaching workshops and courses that focus on enhancing teaching and learning. It also reflects our intensive engagement with the research literature on higher education. Below is a short list of key references that, along with many others, have informed and inspired this work.

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Appendix

Key Traits of Some Learners & Teaching Strategies

Trait	Root Cause	Challenge	Teaching Strategy	Examples
Bite-Sized Attention Spans	Algorithm-driven content (TikTok, Reels).	Struggles with long lectures or readings.	Chunk content + gamify engagement.	Interactive lectures
Visual-First Learning	Dominance of YouTube and social networks.	Difficulty processing text-heavy material, difficulty processing audio-only.	Supply text with visuals + interactivity.	Infographics charts, PPT, Whiteboard, videos, visual note-taking
Demand Instant Feedback	Social media validation (likes, comments).	Frustration with delayed grading.	Use real-time feedback loops.	Expedite grading, use rubric to visualize feedback, peer and self-reviews
Pragmatic & Career-Focused	Fear for lack of employability + economy pressures.	"Why does this matter?" skepticism.	Link theory to real-world impact.	Case Studies, simulations: Mock debates, Industry Certifications
Collaborative & Social	Online communities (Discord, networks).	Isolation in traditional classrooms.	Design peer-driven learning.	Collaborative working techniques, role-playing
Digital Natives (but Need Guidance)	Lifelong exposure to tech, but not always critical use.	Overconfidence in digital literacy.	Teach tech + critical thinking.	AI Ethics Debates. Fact-Checking Drills. Digital Wellbeing

Crave Autonomy	Customizable apps (Spotify, TikTok FYP).	Resistance to rigid structures.	Offer choice + self-paced options.	Learning Menus: "Pick 3 of 6 tasks." Passion Projects. Self-Paced LMS Modules.

Think-Pair-Share (explained in detail)

This discussion technique gives students the opportunity to respond to questions in written form before engaging in meaningful conversation with other students. Asking students to write and discuss ideas with a partner before sharing with the larger group builds confidence, encourages greater participation, and results in more thoughtful discussions.

How to Use

1. Think—Have students write a response to a prompt or a question. PreK-K students can draw their thinking.
2. Pair—Tell students to pair up and share their responses.
3. Share—Reconvene the class and ask pairs to report back on their conversations.

When to Use

Use Think-Pair-Share at any point in the lesson to structure meaningful conversation:

- Before introducing new material to tap into prior knowledge
- After watching a film clip to gauge a reaction
- After reading a short text to begin a discussion
- Before students begin an assignment, such as an essay or a set of word problems, to gather ideas or formalize procedures

Variations

Think-Listening Pair-Share. To work on students' listening skills, tell them that they can only share their partner's viewpoint during "Share."

Think-Pair-Square. After "Pair," have partners "Square" with another pair to discuss their ideas, making a group of 4.

Metacognition

Students need to assess the demands of the task, evaluate their own knowledge and skills, plan their progress, monitor their progress, and adjust their strategies as needed.

Self-directed learning and actively taking the time to reflect on one's own learning is described as metacognition. Developing metacognitive skills through deliberate practice and embedded checkpoints fosters intellectual habits that are valuable for learning retention and across disciplines.

These checkpoints should occur at the beginning of the learning where students are encouraged to practice task assessment and planning. Metacognition should continue through the evaluation of the outcomes and adjust approaches accordingly.

A very important factor for developing this flexible mindset is rooted in students' self-efficacy. It is extremely useful for instructors to stress the importance of developmental approaches so that they can fully appreciate that intelligence is not fixed.

Strategies to promote metacognition

- Be explicit; indicate what you do not want; provide performance criteria.
- Provide opportunities to peer and self-assess; practice; and give feedback.
- Ask your students whether the answer they provide is reasonable given the problem.

Here are some helpful prompts to ask your learners:

- What do I already know about this topic?
- How does this topic make me feel?
- Does this topic relate to something I already know?
- How can I apply this topic in another context?

One activity that can be done at the end of class is Stephen Brookfield' Critical Incident Questionnaire.

Other metacognitive strategies that lead to self-directed learners are:
One-minute paper: Students spend one minute at the end of a class writing a brief response to a specific question or summarizing what they learned, which helps teachers gauge understanding quickly.

Muddiest/mightiest point: Students identify the least clear ("muddiest") or most significant ("mightiest") concept from the lesson, providing feedback that highlights areas of confusion or importance.

KWL (Know-Learned-Will Learn): Before, during, and after a new lesson, students fill out a chart detailing what they Know, what they Want to know, and what they have Learned, fostering engagement and self-directed learning.

3-2-1 ticket: At the end of a session, students write down three things they learned, two things they found interesting, and one question they still have, which helps consolidate learning and clarify remaining doubts.

Reflective Writing (“Nuggets”)

After a lesson or assignment, students write a short reflection capturing the “nugget” - the most important thing they learned, what surprised them, or what they’re still wondering about. This simple habit helps learners make meaning and monitor their understanding.

Exam Wrappers

These are short reflection tools given after a quiz or test. Students review their preparation strategies, identify common errors, and plan how to improve next time. Exam wrappers help shift focus from just grades to learning processes.

Retrospective Post-Assessment

At the end of a unit or course, students revisit the learning outcomes and assess how their understanding has changed. By comparing their “before” and “after,” they can recognize growth and identify areas that still need work.

Scan the QR code to find the online version
of the workbook and more.