Teaching Methods & Practices

TEACHING METHODS & PRACTICES

A Resource for Novice Teachers

JASON PROCTOR

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This book is intended to serve as a resource for novice teachers as they master the art of effective classroom management, assessment, and lesson planning. At the undergraduate level, this book is designed to accompany the instruction in the EDUC 4353: Secondary Teaching Methods & Practices course prior to the full-internship experience. At the graduate level, this book is designed to support the instruction in the EDUC 5283: Teaching Methods course with a special focus on supporting Alternatively Certified Educators. Each chapter presents a component of the teaching and learning process critical for teacher development and describes how that component is relevant to the secondary classroom.

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Commons licensed content. These open access resources include many of the videos and some of the resources that are linked throughout the book.

MANAGING LEARNER BEHAVIOR

CLASSROOM NORMS & PROCEDURES

The classroom is a complex environment, and any number of things could potentially disrupt student learning. One of your roles as a teacher is to manage the learning environment to minimize distractions and maximize learning. A strong system of classroom management typically includes the following components:

1. Clearly defined purpose
2. Positively stated behavioral norms
3. Consequence hierarchy
4. Positive reinforcement system
5. Established classroom procedures
6. Consistency

In this section, you will learn how to establish clear expectations for student behavior and define classroom procedures to maximize instructional time.

Learning Objectives

By the end of this chapter, you will be able to:

- Explain the purpose of classroom norms/rules; and
- Justify the need for planning and practicing classroom procedures.

Behavioral Norms*

Defining behavioral expectations helps establish an environment where students can engage in the learning process. Effective classroom management starts with defining your expectations for student behavior (Marzano, 2007). Classroom rules, also referred to as norms, express standards of behavior for which individual students need to take responsibility. Consider how the typical set of classroom rules listed below define expectations for student behavior.

- Treat others with courtesy and politeness.
- Make sure to bring the required materials to class and to

activities.
- Be on time for class and other activities.
- Listen to the teacher and to others when they are speaking.
- Follow all school rules.

Care should be taken when constructing classroom rules or norms. Most education experts recommend a small number of general, positively stated, behavior-based rules (Thorson, 2003; Brophy, 2004). Notice in the list above, the rules are not numerous, they are stated in positive terms ("Do X..." rather than negative terms "Do not do Y..."), and each covers a collection of more specific behaviors. For example, the rule "Bring all materials to class" covers bringing pencils, paper, textbooks, homework papers, and permission slips—depending on the situation. As a result of their generality, behavioral expectations can be applied across a variety of situations.

Key Elements of Strong Norms

- Concise in wording and few in number (3-5)
- Objective and easy to observe

- Positively stated
- Something that you are prepared to uphold at all times

Tips from the Pros: Strategies to Try

Wondering where to begin? Check out Jennifer Gonzalez's blog post, Classroom Management: 4 Keys to Starting the Year off Right, where she explains her 4 Keys to Start

Classroom behavioral norms can be planned either by the teacher alone or by the teacher with input from students. Rules defined by the teacher may be more efficient and consistent, and in this sense fairer, but rules influenced by the students may be supported more fully by the students. Because rules focus strongly on personal responsibility, however, there is a stronger case for involving students in making them (Brookfield, 2006; Kohn, 2006). As a new teacher, it is typically easier to start with a predetermined set of expectations and involve students in the "unpacking" of the norms when discussing why they are necessary.

Including students in describing what good and bad examples look like will go a long way in building student "buy-in" to your plan.

the Year off Right which focuses on developing rules and consequences.

Consequences

Consequences are the result of an action. Therefore, consequences could result in a positive or negative outcome. Applying positive consequences can be used to reinforce desired behavior and help you in establishing a positive learning environment. However, establishing a positive learning environment doesn't guarantee that your students will always meet your expectations. Later chapters will focus on methods to correct off-task behavior, but once you have developed a set of behavioral norms you need to consider what will happen when students do not meet those expectations. Consequences should be used when attempts to correct student behavior have not been successful. Ideally, consequences should relate to the behavioral infraction, be delivered privately, grow in severity, and be meaningful to students (See Doug Lemov's posts about the Art of Consequences Part 1 and Part 2). If students do not understand the reason behind the consequence or do not care about the impact of the consequence, then the chances of the

consequence changing behavior decrease. To best support your goal of establishing a positive learning environment and positive relationships with your student it would be best to start with minor interventions before moving to school-based consequences. A sample plan for responding to off-task behavior might look like the list below.

- Warning
- Conference with Teacher
- Call Home
- Referral to Office

Key Elements of Strong Response Hierarchies:

Positive Consequences

- Tied to the needs of students. Some students are more intrinsically motivated than others and require systems to support their choices.
- 3 Types: tangible, social, and activity
- Aligned to your classroom values
- Generous. Systems should allow for as much reinforcement as possible.

Negative Consequences

- Increase support as students move up the consequence hierarchy
- Appropriate for the grade and amount of time in class
- Include consequences students care about and don't want to happen
- Include a "severity clause" for dangerous or extremely disrespectful behavior
- Delivered quickly, early, consistently, privately, and without emotion.

Designing behavioral norms and response techniques will be a work in progress for you as you find your rhythm in your classroom and what works with your style and best for your students. One of the best things you can do as a young teacher is to talk to other teachers and even observe the classrooms of your peers. If you are looking for an experienced teacher that writes a lot about classroom management, then I suggest checking out Michael Linsin's blog as he regularly shares strategies and resources to help you hone your management skills.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://open.ocolearnok.org/teachingmethods/?p=5#oembed-1

Tips from the Pros: Creating a SHARED Vision

Wondering how to partner with your students to establish classroom expectations? Check out Bob Sullo's blog post, Beyond Goals: Creating an Inspiring Classroom, where he provides step-by-step actions you can take to build a shared vision of an inspiring classroom.

Procedures to Routines*

"The number one problem in the classroom is not discipline; it is the lack of procedures and routines." -Harry Wong

Routines or procedures are specific ways of doing common, repeated classroom tasks or activities. Examples include checking daily attendance, dealing with students who arrive late, or granting permission to leave the classroom for an errand. Academically related procedures include ways of turning in daily homework (e.g. putting it on a designated shelf at a particular time), of gaining the teacher's attention during quiet seatwork (e.g. raising your hand and waiting), and of starting a "free choice" activity after completing a classroom assignment. Procedures serve the practical purpose of making activities and tasks flow smoothly. As such, procedures are more like social conventions than moral expectations.

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https://open.ocolearnok.org/teachingmethods/?p=5#oembed-2

For teachers, an initial management task is to establish procedures and routines as promptly as possible. Teachers should plan and practice critical routines before students arrive on day one (Bambrick-Santoyo, 2016). Planning exactly how you want a routine to work and how you will teach it to students will increase the likelihood that your students

understand and follow your routine. Thus, saving valuable teaching and learning time. When planning routines try to limit the number of steps to keep the routine manageable. Practice the routine yourself to make sure that it works smoothly, then script how you will practice the routine with your students. Once your students arrive, then practice, practice, practice. You may need to revise your procedure if it is not working efficiently or you may need to refresh students with a practice session mid-year if they begin to slip. Either way, investing the time in planning routines will go a long way in maximizing your instructional time and managing behavior. If you are looking for a template to help plan your rollout of a new procedure, then check out the Rolling Out Procedures template.

Key Elements of Procedures:

- Concise number of steps
- Designed for common classroom tasks
- Discussed and practiced
    - Explain how the procedure benefits the students to build buy-in

- Model good and bad execution
- Practice, practice, practice

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An interactive H5P element has been excluded from this version of the text. You can view it online here:
https://open.ocolearnok.org/teachingmethods/?p=5#h5p-2

Tips from the Pros: How to Start the Year

Wondering how to begin your school year? Check out Joey Feith's blog post, How I Start My School Year: Lesson One, where he explains how his year starts in his PE classes focuses on developing expectations, consequences, and a culture conducive to learning (3-part series).

https://www.spreaker.com/user/sfecich/chalk-cross-good-one

Conclusion

Classroom management is not something best left to chance. The more you plan and define your expectations, the more likely your classroom will run smoothly. Having a plan does not mean you won't have to make adjustments along the way, but with a system in place, you and your students can spend more time focusing on the teaching and learning process and less time stumbling over misunderstandings.

Summarize Key Understandings

An interactive H5P element has been excluded from this version of the text. You can view it online here:
https://open.ocolearnok.org/teachingmethods/?p=5#h5p-1

Peer Examples

Check out Jordan Baker's Classroom Management Plan designed for an ELA classroom.

Check out this example classroom management plan.

Check out this example of a classroom management plan created by Allie Turner.

Check out this example of a classroom management plan created by Grace Pere.

Self-Evaluation

Exercise: Use the self-evaluation tool below to assess your current efforts to establish a positive learning environment.

Establishing a Positive Learning Environment Component	Yes	No	Working on It
My classroom norms are observable, measurable, positively stated, understandable, and always apply.			
I have 5 or fewer classroom norms.			
My classroom norms are prominently posted.			
I have developed lessons to teach classroom norms.			
I refer to norms regularly when interacting with students.			
80% of my students can restate the classroom expectations.			
I have identified essential classroom procedures.			
I directly teach classroom procedures.			
I review and practice classroom procedures with students throughout the year.			
I provide specific positive feedback when students follow procedures.			
80% of my students can demonstrate classroom procedures.			

Self-Guided Learning

Modules

Check out the self-guided modules from the IRIS Center of Vanderbilt University.

- Learning the Components of a Comprehensive Behavior Management Plan
- Developing Your Own Comprehensive Behavior Management Plan

References & Attribution

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TEACHER VOICE

Now that you have established your classroom rules and procedures the real challenge begins: maintaining those expectations over the entire school year. In this section, we will look at ways that you can be proactive in your efforts to help students be successful in meeting your expectations. Specifically, we will explore how your facial expressions, posture, and tone influence the messages you send.

Learning Objectives

By the end of this chapter, you should be able to:

- Stand and speak with purpose.
- Give clear, concise instructions.

Teacher Voice

In addition to having a plan of how you want your students to behave and how you will organize your classroom, it is also important to think about how you will present yourself when things begin to go slightly off track. In his blog and other Teach Like A Champion books, Doug Lemov (2015) refers to this skill as Strong Voice. Over time, your students may just refer to it as your "Teacher Voice." Whatever you call it, one thing you must realize is that your posture, facial expression, and tone have a strong influence on the learning environment. According to Lemov (2015), there are six foundational principles for presenting a strong teacher voice. Therefore, it is worth your time to practice developing self-control in these areas so as not to send the wrong messages to your students.

Key Elements of a Strong Teacher Voice:

- Use Formal Register: Speak and stand with a purpose.
- Square Up, Stand Still: Stand tall, face audience, and hold.
- Quiet power: Lower your voice and speak

slower.

- Economy of Language: Excess words initiate distraction
- Do Not Talk Over: “Self-interrupt” to wait for students to listen.
- Do Not Engage: Don’t stray, stay focused on the current issue

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An interactive H5P element has been excluded from this version of the text. You can view it online here:
https://open.ocolearnok.org/teachingmethods/?p=24#h5p-4

To see a detailed breakdown of the video above, check out Doug Lemov's blog post, Erin Krafft Uses Just Enough Correction.

Register

Register encompasses eye contact, body position, gestures, facial expression, and rhythm of language by a person during a conversation or interaction (Lemov, Hernandez, & Kim, 2016). Recognize the difference between casual, formal, and urgent registers. Learn how to use each in the classroom and make your shifts between the registers obvious.

Three Types of Registers		
Register	Voice/Words	Body Language
Casual	Words may run together (pitter-patter rhythm) Wide range of inflection and tone Language itself is colloquial	Asymmetrical/ relaxed body posture (e.g., leaning more on one foot, or leaning on a wall) Inconsistent eye contact Repetitive/ sweeping hand gestures
Formal	Clear, slower articulation of syllables and distinction between words Words chosen carefully	Words chosen carefully Symmetrical body posture Standing up straight Steady eye contact Chin up Hands clasped or behind back; simple, controlled hand gestures
Urgent	Heightened tone and volume Words run together Increased tension in voice	Wide eyes Leaning in vs. standing straight up Sharp gestures

*Table adopted from Lemov, D., Hernandez, J., & Kim, J. (2016)

An interactive H5P element has been excluded from this version of the text. You can view it online here:
https://open.ocolearnok.org/teachingmethods/?p=24#h5p-5

In the video below, watch how the teacher's posture, facial expressions, and tone change based upon her interactions with her students and her perceived objectives.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=24#oembed-2

Clear Directions

Throughout a class period, you may give your students dozens

of directions. How well your students execute those directions will depend on how clear you are in delivering those directions. When providing directions (for a task or to correct off-task behavior), recall your principles of a strong teacher voice and provide directions that are formal, concise, and actionable.

Key Principles of Clear Directions

- Positive: Don't waste your time telling them what not to do.
- Specific: Tell students what to do and how to do it.
- Concrete: Provide clear actionable steps.
- Sequential: State what you want, in the order you want it.
- Observable: Actions you can see.
- Check: Check for understanding

Watch how this teacher uses the principles of clear directions and strong teacher voice to ensure that her students know what is expected.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://open.ocolearnok.org/teachingmethods/?p=24#oembed-3

To see a detailed breakdown of the video above, check out Doug Lemov's blog post, Portrait of a Teacher in 8 Scenes.

Conclusion

Key Understandings

- Your facial expressions, posture, and tone influence the messages you send.
- Sometimes students don't follow your instructions because your instructions are unclear.
- Unclear instructions allow students the

opportunity to interpret based on what is most appealing to them.
- Set students up for success with clear directions of what to do next.

References & Attribution

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Lemov, D., Hernandez, J., & Kim, J. (2016). Teach Like A Champion Field Guide 2.0. San Francisco, CA: Jossey-Bass

CLASSROOM LAYOUT & TEACHER RADAR

One of the more difficult skills for new teachers is a clear sense of what is happening in the classroom at all times. It is no fault of their own, it takes time to not only master the content they are expected to teach but also how to simultaneously check for understanding and engagement. In this chapter, we will explore how the physical layout of your classroom factors into student engagement and look at strategies to help you better recognize what is happening in your classroom at all times.

Learning Objectives

By the end of this chapter, you will be able to:

- Describe how the physical learning environment influences student learning.
- Circulate the room and scan for off-task

behavior.

Classroom Layout*

Viewed broadly, classrooms may seem to be arranged in similar ways, but there are actually important alternative arrangements to consider. Variations exist because of grade level, the subjects taught, the teacher's philosophy of education, and of course the size of the room and the furniture available. The "best" arrangement depends on what your students need and on the kind of teaching that you prefer and feel able to provide (Boyner, 2003; Nations & Boyett, 2002). Whatever the arrangement that you choose, it should help students to focus on learning tasks as much as possible and minimize the chances of distractions.

Listen to two HS teachers discuss how desk placement plays a role in classroom management

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https://open.ocolearnok.org/teachingmethods/?p=60#audio-60-1

Displays and wall space

All classrooms have walls, of course, and how you fill them can affect the mood or feeling of a classroom. Ample displays make a room interesting and can be used to reinforce curriculum goals and display (and hence publicly recognize) students' work. But too many displays can also make a room seem "busy" or distracting as well as physically smaller. They can also be more work to maintain. If you are starting a new school year, then, a good strategy is to decorate some of the walls or bulletin board space, but not to fill it all immediately. Leaving some space open leaves flexibility to respond to ideas and curriculum needs that emerge after the year is underway. The same advice applies especially to displays that are high maintenance, such as aquariums, pets, and plants. These can

serve wonderfully as learning aids, but do not have to be in place on the first day of school. Another option to consider is how you might use wall space to engage students during class. Consider how Lisa Wheeler uses vertical spaces to activate student thinking during class (bonus: Mrs. Wheeler also shares tips on how to assign students to groups).

Learn More: Effective Classroom Arrangement

Check out the Effective Room Arrangement: Middle & High School packet by the Iris Center. This resource does a great job of summarizing what researchers have found about how the physical learning environment impacts learning. There are also case studies included which offer a great opportunity to think about your future classroom.

Unique spatial arrangements

The best room arrangement sometimes depends on the grade level or subject area of the class. Some subjects and grade levels lend themselves especially well to small group interaction, in

which case you might prefer not to seat students in rows, but instead around small-group tables or work areas. The latter arrangement is sometimes preferred by elementary teachers, but is also useful in high schools wherever students need lots of counter space, as in some shops or art courses, or where they need to interact, as in English as a Second Language course (McCafferty, Jacobs, & Iddings, 2006). The key issue in deciding between tables and rows, however, is not grade level or subject as such, but the amount of small group interaction you want to encourage, compared to the amount of whole-group instruction. As a rule, tables make working with peers easier while rows make listening to the teacher more likely and group work slightly more awkward physically.

Listen to Kevin Stoller discuss ideas to make learning environments more positive spaces to interact, collaborate, and work together. See Stoller's book: Creating Better Learning Environments

One or more interactive elements has

been excluded from this version of the text. You can view them online here: https://open.ocolearnok.org/teachingmethods/?p=60#audio-60-2

Ironically, some teachers also experience challenges with room arrangement because they do not actually have a classroom of their own because they must move each day among other teachers' rooms. "Floating" is especially likely for specialized teachers (e.g. music teachers in elementary schools, who move from class to class) and in schools that have an overall shortage of classrooms. Floating can sometimes be annoying to the teacher, though it actually also has advantages, such as not having to take responsibility for how other teachers' rooms are arranged. If you find yourself floating, it helps to consider a few key strategies, such as:

- consider using a permanent cart to move crucial supplies from room to room
- make sure that every one of your rooms has an overhead

projector (do not count on using chalkboards or computers in other teachers' rooms)
- talk to the other teachers about having at least one shelf or corner in each room designated for your exclusive use

Key Principles of Effective Classroom Layout

- Ensure frequently used materials are easily accessible
- Provide a sense of order and organization
- Plan pathways to minimize congestion and distraction
- Students should have a clear view of instructional presentations
- Align instruction with room layout
- Consider how well you will be able to gain access to every student

Teacher Radar

Doug Lemov (2015) uses the term 'Radar' to refer to a teacher's ability to see the class as it really is. Two skills that Lemov encourages teachers to develop are the ability to scan

for off-task behavior and break the plane. By consciously scanning the room we can look to prevent behavioral issues before they become issues. Also, scanning allows us to read the class to see if they are following along, which fits nicely with our efforts to check for understanding (more on that to come). Moving away from the front of the room also helps prevent behavioral issues from building, especially if we make it a regular routine, not just when things are getting out of hand.

Note in the example below, how Ms. Sentel uses proximity control correctly to redirect a student's attention, but in the non-example her implementation of the strategy falls short.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=60#oembed-1

Key Principles of Teacher Radar

- Scan: Be seen looking at all parts of the room, especially the "hot spots".
- Move: Circulate through the desks, pause along the perimeter, and scan.
    - Break the plane early and often
    - Stand at the corners
    - Move away from students who are speaking
    - Move toward students who are off-task

Watch how this teacher moves around the classroom and continually scans to catch potential off-task behavior before it becomes an issue.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=60#oembed-2

Conclusion

The layout of your classroom could help or hinder your learning experience depending on the way you desire students to interact. Likewise, your ability to scan and move about the room will send a message to students about their behavior. Combined, a layout that supports the type of student engagement and your active monitoring of student behavior will help you establish a positive learning environment.

Summarize Key Understandings

An interactive H5P element has been excluded from this version of the text. You can view it online here:
https://open.ocolearnok.org/teachingmethods/?p=60#h5p-6

Self-Evaluation

Exercise: Use the self-evaluation tool below to assess your current efforts to establish a positive learning environment.

Establishing a Positive Learning Environment Component	Yes	No	Working On It
I have designed the classroom floor plan to allow for ease of movement for Active Supervision.			
I continually monitor all areas of the room by moving and interacting frequently and strategically.			
I continually monitor all areas of the room by scanning and interacting frequently and strategically.			

References & Attribution

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INDIVIDUAL STUDENT CORRECTIONS

So far we have focused on preventing behaviors that are inappropriate or annoying. The advice has all been proactive or forward-looking: plan classroom space thoughtfully, create reasonable procedures and rules, pace lessons and activities appropriately, and communicate the importance of learning. Although we consider these ideas important, it would be naïve to imply they are enough to prevent all behavior problems. In this chapter, we will explore methods to address student behavior that does not meet established expectations.

Learning Objectives

By the end of this chapter, you will be able to:

- Correct off-task behavior using the least invasive intervention necessary.

- Narrate what students do well, not what they do wrong.
- Differentiate between acknowledgment and praise.
- Identify when to apply a consequence versus a correction.
- Apply conflict resolution strategies.

Individual Student Corrections*

For various reasons, students sometimes still do things that disrupt other students or interrupt the flow of activities. At such moments the challenge is not about long-term planning but about making appropriate, prompt responses. Misbehaviors left alone can be contagious, a process educators sometimes call the ripple effect (Kounin, 1970). Chatting between two students, for example, can gradually spread to six students; rudeness by one can eventually become rudeness by several; and so on. Because of this tendency, delaying a response to inappropriate behavior can make getting students back on track harder than responding to it as immediately as possible.

There are many ways to respond to inappropriate behaviors, of course, and they vary in how much they focus on the immediate behavior compared to longer-term features or patterns of a student's behavior. Smith, Fisher, & Frey (2015, p.71) proposed the following decision-making matrix to help teachers determine how to best intervene.

Decision-Making Matrix for Responding to Problematic Behavior			
What is the function of this behavior?	Does this warrant immediate intervention? ["Yes" answers indicate that immediate intervention is needed]	Should intervention be delayed or deferred? ["No" answers indicate a possible need to delay the intervention]	What are the ways to intervene?
• Social attention • Obtaining something • Avoidance • Escape • Power or control	• Is this misbehavior harmful? • Is the behavior distracting to others? • Is the behavior contagious? • Does the student appear to be testing the system?	• Do I have all the facts? • Is the student in an acceptable state of mind? • Am I in an acceptable state of mind? • Is this an isolated incident?	• Move closer • Signal • Redirect • Replace • Reduce • Relocate • Ignore • Reinforce
Why?	When?	When?	How?

There are so many ways to respond that we can describe only a sample of the possibilities here. None are effective all the

time, though all work at least some of the time. We start with a response that may not seem on the surface like a remedy at all—simply ignoring misbehaviors.

Ignoring misbehaviors*

A lot of misbehaviors are not important or frequent enough to deserve any response at all. They are likely to disappear (or extinguish, in behaviorist terms) simply if left alone. If a student who is usually quiet during class happens to whisper to a neighbor once in a while, it is probably less disruptive and just as effective to ignore the infraction than to respond to it. Some misbehaviors may not be worth a response even if they are frequent, as long as they do not seem to bother others. Suppose, for example, a certain student has a habit of choosing quiet seat-work times to sharpen her pencil. She is continually out of her seat to go to the sharpener. Yet this behavior is not really noticed by others. Is it then really a problem, however unnecessary or ill-timed it may be? In both examples ignoring the behavior may be wise because there is little danger of the behavior disrupting other students or of becoming more frequent. Interrupting your activities—or the students'—might cause more disruption than simply ignoring the problem.

That said, there can still be problems in deciding whether a particular misbehavior is truly minor, infrequent, or unnoticed by others. Unlike in our example above, students

may whisper to each other more than "rarely" but less than "often": in that case, when do you decide that the whispering is in fact too frequent and needs a more active response from you? Or the student who sharpens her pencil, mentioned above, may not bother most others, but she may nonetheless bother a few. In that case how many bothered classmates are "too many"? Five, three, just one, or...? In these ambiguous cases, you may need more active ways of dealing with inappropriate behavior, like the ones described in the next sections.

You know that you should be diligent in your application of consequences by being quick, early, consistent, private, and free of emotion. However, that leaves us with the question, when do we actually apply consequences?

High-P Requests

When teachers are having difficulty getting students to respond to their requests they might find the practice of using High-Probability Requests to be a useful technique. High-probability (high-p) requests are a series of actions to which a student is highly likely to respond. Asking students to complete multiple actions that they are likely to respond positively may then lead them to a state of mind where they are more likely to comply with a request for targeted behavior. Check out the Fundamental Skill Sheet: High Probability Requests by the Iris Center for more information.

Notice in the example below the procedures Mrs. Ward uses to implement high-p requests in the example and where her delivery falls short in the non-example.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=73#oembed-1

Acknowledgment vs. Praise

One area that we should be aware of is how we react while correcting student behavior or even acknowledging positive behavior. Good & Brophy (2008) maintain that praise does not work as a positive reinforcement as well with adolescents as with primary aged students. Therefore, teachers at the secondary levels are encouraged to use praise for student accomplishments and acknowledge efforts that meet expectations. Some teachers are effective at narrating the positive behaviors of other students as a subtle way of reminding, or encouraging, the rest of the class to get on task.

Key Principles of Acknowledgment and Praise

- Acknowledgment used when students meet your expectations
    - Describes a productive behavior
    - Thank students for complying
    - No addition of value judgment or excited tone.
        - "Thanks for being ready, Marcus"
        - "Marcus is ready"
    - Use acknowledgment to reinforce an expectation
- Praise used when students exceed your expectations
    - Adds judgment words like "great" or "fantastic"
    - Delivered with an enthusiastic tone
        - "Fantastic insight, Marcus"
        - "Great job, Marcus"
    - Praising students for merely meeting

expectations may reduce student behavior over time as it "cheapens" your praise.
- Save praise for when it is truly earned.

Inspired by resources from the Grab and Go section of www.teachlikeachampion.com.

In the example below, note the procedures Ms. Fisher uses to deliver behavior-specific praise and where her delivery falls short in the non-example.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://open.ocolearnok.org/teachingmethods/?p=73#oembed-2

Nonverbal Interventions*

Sometimes it works to communicate using gestures, eye contact, or "body language" that involves little or no speaking. Nonverbal cues are often appropriate if misbehavior is just

a bit too serious or frequent to ignore but not serious or frequent enough to merit taking the time deliberately to speak to or talk with the student. If two students are chatting off-task for a relatively extended time, for example, sometimes a glance in their direction, a frown, or even just moving closer to the students is enough of a reminder to get them back on task. Even if these responses are insufficient, they may help keep the off-task behavior from spreading to other students.

A risk of relying on nonverbal cues, however, is that some students may not understand their meaning or may even fail to notice them. For example, if the two chatting students mentioned above are engrossed in their talking, they may not see you glance or frown at them. Or they might notice but not interpret your cue as a reminder to get back on task. Misinterpretation of nonverbal gestures and cues is more likely in young children, who are still learning the subtleties of adults' nonverbal "language" (Guerrero & Floyd, 2005; Heimann, et al., 2006). It is also more likely with students who speak limited English or whose cultural background differs significantly from your own. These students may have learned different nonverbal gestures from your own as part of their participation in their original culture (Marsh, Elfenbein, & Ambady, 2003).

In the video below, watch how the teacher uses nonverbal cues to correct student behavior without disrupting the flow of the lesson.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=73#oembed-3

Unseen Intervention

There may be moments when you need to stop the class to address an issue with a particular student, but you don't want to disrupt the flow of learning. When those moments arise, you can take a page out of the magician's handbook and try your hand at misdirection. This strategy is useful when you want to keep things private between you and the student.

The Art of Misdirection

1. Assign a short task for the class to work on individually.
2. Circle around the class to the student you

need to address. Pause along the way to monitor the work of others (be seen doing your normal "thing").
3. In a whisper, ask the student to stop what they're doing and look at you.
4. Whisper the correction.
5. Give a direction on what to do next.
6. Watch for corrected behavior and acknowledge it.

Types of Consequences*

Consequences are the outcomes or results of an action. When managing a classroom, two kinds of consequences are especially effective for influencing students' behavior: natural consequences and logical consequences. As the term implies, natural consequences happen "naturally", without deliberate intention by anyone. If a student is late for class, for example, a natural consequence is that he misses information or material that is needed to do an assignment. Logical consequences happen because of the responses of or decisions by others, but they also have an obvious or "logical" relationship to the original action. If one student steals another's lunch, for example, a logical consequence might be for the thief to

reimburse the victim for the cost of the lunch. Natural and logical consequences are often woven together and thus hard to distinguish: if one student picks a fight with another student, a natural consequence might be injury not only to the victim, but also to the aggressor (an inherent byproduct of fighting), but a logical consequence might be to lose friends (the response of others to fighting). In practice, both may occur.

In general, research has found that both natural and logical consequences can be effective for minimizing undesirable behaviors, provided they are applied in appropriate situations (Weinstein, Tomlinson-Clarke, & Curran, 2004). Consider a student who runs impulsively down school hallways. The student is likely to have "traffic accidents", and thus (hopefully) will see that running is not safe and to reduce the frequency of running. Or consider a student who chronically talks during class instead of working on an assigned task. The student may have to make up the assignment later, possibly as homework. Because the behavior and the consequence are connected logically, the student is relatively likely to see the drawback of choosing to talk, and to reduce how much he or she talks on subsequent occasions. In either case, whether natural or logical, the key features that make consequences work are (a) that they are appropriate to the misbehavior and (b) that the student understands the connection between the consequences and the original behavior.

Notice, though, that natural and logical consequences do

not always work; if they did, there would be no further need for management strategies! One limitation is that misbehaviors can sometimes be so serious that no natural or logical consequence seems sufficient or appropriate. Suppose, for example, that one student deliberately breaks another student's eyeglasses. There may be a natural consequence for the victim (he or she will not be able to see easily), but not for the student who broke the glasses. There may also be no consequences for the aggressor that are both logical and fully satisfactory: the aggressor student will not be able to repair the broken glasses himself, and may not be able to pay for new glasses either.

Another limitation of natural and logical consequences is that their success depends on the motives of the misbehaving student. If the student is seeking attention or acceptance by others, then consequences often work well. Bullying in order to impress others, for example, is more likely to lose friends than to win them—so bullying motivated in this way is self-limiting. If a student is seeking power over others, on the other hand, then the consequences of bullying may not reduce the behavior. Bullying in order to control others' actions by definition actually achieves its own goal, and its "natural" result (losing friends) would be irrelevant. Of course, a bully might also act from a combination of motives, so that natural and logical consequences limit bullying behavior, but only partially.

A third problem with natural and logical consequences is

that they can easily be confused with deliberate punishment (Kohn, 2006). The difference is important. Consequences are focused on repairing damage and restoring relationships, and in this sense, they focus on the future. Punishments highlight a mistake or wrongdoing and in this sense focus on the past. Consequences tend to be more solution-focused. Punishments tend to highlight the person who committed the action, and they often shame or humiliate the wrongdoer.

Consequences vs. Correction

More than likely, you will find yourself providing more correction than consequences in the secondary classroom. The keys to providing strong correction are similar to those we have discussed regarding providing clear directions.

Key Principles of Applying Consequences vs. Correction

When applying consequences consider persistence, degree of disruption, and motivation.

Consequence

- Persistently engages in off-task behavior
- Disrupts other's learning
- Clearly testing teacher's expectations

Correction

- Distraction or Misunderstanding
- Doesn't disrupt others

Inspired by resources from the Grab and Go section of www.teachlikeachampion.com.

Key Principles of Correction

- Private: Provide correction privately, or at least the illusion.
- Neutral: Correct with a neutral tone and expression.
- Tag Behavior: Identify the action that needs correcting.
- Quick: State what you want, then get back to

teaching.
- Restore: Make an effort to restore trust and confidence with a positive gesture.

Listen to Angela Watson's podcast, EP178 How to act (rather than react) and stop wasting class time, to learn strategies to eliminate misbehavior and interruptions to maximizing learning time.

Conflict Resolution and Problem-Solving *

When a student misbehaves persistently and disruptively, you will need strategies that are more active and assertive than the ones discussed so far, and that focus on conflict resolution—the reduction of disagreements that persist over time. Conflict resolution strategies that educators and teachers tend to use usually have two parts (Jones, 2004). First, they involve ways of identifying what "the" problem is precisely. Second, they remind the student of classroom expectations and rules with simple clarity and assertiveness, but without

apology or harshness. When used together, the two strategies not only reduce conflicts between a teacher and an individual student, but also provide a model for other students to follow when they have disagreements of their own. The next sections discuss the nature of assertion and clarification for conflict resolution in more detail.

Step 1: clarifying and focusing: problem ownership*

Classrooms can be emotional places even though their primary purpose is to promote thinking rather than expression of feelings. The emotions can be quite desirable: they can give teachers and students "passion" for learning and a sense of care among members of the class. But feelings can also cause trouble if students misbehave: at those moments negative feelings—annoyance, anger, discomfort—can interfere with understanding exactly what is wrong and how to set things right again. Gaining a bit of distance from the negative feelings is exactly what those moments need, especially on the part of the teacher, the person with (presumably) the greatest maturity.

In a widely cited approach to conflict resolution called Teacher Effectiveness Training, the educator Thomas Gordon describes this challenge as an issue of problem ownership, or deciding whose problem a behavior or conflict it really is (Gordon, 2003). The "owner" of the problem is the primary

person who is troubled or bothered by it. The owner can be the student committing the behavior, the teacher, or another student who merely happens to see the behavior. Since the owner of a problem needs to take primary responsibility for solving it, identifying ownership makes a difference in how to deal with the behavior or problem effectively.

Suppose, for example, that a student named David makes a remark that the teacher finds offensive (like "Sean is fat"). Is this remark the student's problem or the teacher's? If David made the comment privately to the teacher and is unlikely to repeat it, then maybe it is only the teacher's problem. If he is likely to repeat it to other students or to Sean himself, however, then maybe the problem is really David's. On the other hand, suppose that a different student, Sarah, complains repeatedly that classmates refuse to let her into group projects. This is less likely to be the teacher's problem rather than Sarah's: her difficulty may affect her ability to do her own work, but not really affect the teacher or classmates directly. As you might suspect, too, a problem may sometimes affect several people at once. David, who criticized Sean, may discover that he offended not only the teacher, but also classmates, who therefore avoid working with him. At that point the whole class begins to share in some aspect of "the" problem: not only is David prevented from working with others comfortably, but also classmates and the teacher begin dealing with bad feelings about David.

Step 2: active, empathetic listening *

Diagnosing accurately who really has a problem with a behavior—who "owns" it—is helped by a number of strategies. One is active listening—attending carefully to all aspects of what a student says and attempting to understand or empathize as fully as possible, even if you do not agree with what is being said (Cooper & Simonds, 2003). Active listening involves asking questions in order continually to check your understanding. It also involves encouraging the student to elaborate on his or her remarks, and paraphrasing and summarizing what the student says in order to check your perceptions of what is said. It is important not to move too fast toward solving the problem with advice, instructions, or scolding, even if these are responses that you might, as a teacher, feel responsible for making. Responding too soon with solutions can shut down communication prematurely, and leave you with inaccurate impressions of the source or nature of the problem.

Step 3: assertive discipline and I-messages*

Once you have listened well to the student's point of view, it helps to frame your responses and comments in terms of how the student's behavior affects you in particular, especially in

your role as the teacher. The comments should have several features:

- They should be assertive—neither passive and apologetic, nor unnecessarily hostile and aggressive (Cantor, 1996). State the problem as matter-of-factly as possible: "Joe, you are talking while I'm explaining something", instead of either "Joe, do you think you could be quiet now?" or "Joe, be quiet!"
- The comments should emphasize I-messages (Gordon, 1981), which are comments that focus on how the problem behavior is affecting the teacher's ability to teach, as well as how the behavior makes the teacher feel. They are distinct from you-messages, which focus on evaluating the mistake or problem which the student has created. An I-message might be, "Your talking is making it hard for me to remember what I'm trying to say." A you-message might be, "Your talking is rude."
- The comments should encourage the student to think about the effects of his or her actions on others—a strategy that in effect encourages the student to consider the ethical implications of the actions (Gibbs, 2003). Instead of simply saying: "When you cut in line ahead of the other kids, that was not fair to them", you can try saying, "How do you think the other kids feel when you cut in line ahead of them?"

Step 4: negotiation *

The first three steps describe ways of interacting that are desirable, but also fairly specific in scope and limited in duration. But in themselves, they may not be enough when conflict persists over time and develops a number of complications or confusing features. A student may persist in being late for class, for example, in spite of efforts by the teacher to modify this behavior. Or two students may repeatedly speak rudely to each other, even though the teacher has mediated this conflict in the past. Or a student may fail to complete homework, time after time. Because these problems develop over time, and because they may involve repeated disagreements, they can eventually become stressful for the teacher, the student, and any classmates who may be affected. Their persistence can tempt a teacher simply to dictate a resolution—a decision that can leave everyone feeling defeated, including the teacher.

Often in these situations, it is better to negotiate a solution, which means systematically discussing options and compromising on one if possible. Although negotiation always requires time and effort, it is often less time or effort than continuing to cope with the original problem, and the results can be beneficial to everyone. A number of experts on conflict resolution have suggested strategies for negotiating with students about persistent problems (Davidson & Wood, 2004). The suggestions vary in detail, but usually include some

combination of the steps we have already discussed above, along with a few others:

- Decide as accurately as possible what the problem is. Usually, this step involves a lot of the active listening described above.
- Brainstorm possible solutions, and then consider their effectiveness. Remember to include students in this step; otherwise, you end up simply imposing a solution on others, which is not what negotiation is supposed to achieve.
- If possible, choose a solution by consensus. Complete agreement on the choice may not be possible, but strive for it as best you can. Remember that taking a vote may be a democratic, acceptable way to settle differences in some situations, but if feelings are running high, voting does not work as well. In that case, voting may simply allow the majority to impose its will on the minority, leaving the underlying conflict unresolved.
- Pay attention to how well the solution works after it is underway. For many reasons, things may not work out the way you or students hope or expect. You may need to renegotiate the solution at a later time.

Conclusion*

Classroom management is the coordination of lessons and activities to make learning as productive as possible. It is important because classrooms are complex and somewhat unpredictable, because students respond to teachers' actions in diverse ways, and because society requires that students attend school. There are two major features of management: preventing problems before they occur and responding to them after they occur. Many management problems can be prevented by attending to how classroom space is used, by establishing daily procedures, routines, and rules, by pacing and structuring activities appropriately, and by communicating the importance of learning and of positive behavior to students and parents. There are several ways of dealing with a management problem after it occurs, and the choice depends on the nature of the problem. A teacher can simply ignore a misbehavior, gesture or cue students nonverbally, rely on natural and logical consequences, or engage in conflict resolution strategies. Whatever tactics the teacher uses, it is important to keep in mind their ultimate purpose: to make learning possible and effective.

Summarizing Key Understandings

An interactive H5P element has been excluded from this version of the text. You can view it online here:

https://open.ocolearnok.org/teachingmethods/?p=73#h5p-7

Self-Evaluation

Exercise: Use the self-evaluation tool below to assess your current efforts to establish a positive learning environment.

Establishing a Positive Learning Environment Component	Yes	No	Working on It
I give detailed positive feedback that specifically describes the behavior and provide a rationale.			
I provide a public acknowledgment of expectations met.			
I provide public praise when students exceed my expectations and my students can tell why they received the praise.			
I respond to off-task behavior in a respectful way that reduces the probability of escalating behavior.			
I use nonverbal cues to signal students that I am aware of their behavior and offer redirection.			
I use appropriate strategies to de-escalate or diffuse intense behavior.			
I acknowledge appropriately behaving students in the proximity of a student who is not following expectations as a strategy to correct behavior.			
I provide brief, clear, and private verbal reminders of the expected behavior from the classroom rules when necessary.			

Self-Guided Learning

Check out the self-guided modules from the IRIS Center of Vanderbilt University titled,

- Addressing Disruptive and Noncompliant Behaviors (Part 1): Understanding the Acting-Out Cycle
- Addressing Disruptive and Noncompliant Behaviors (Part 2): Understanding the Acting-Out Cycle

References & Attribution

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Smith, D., Fisher, D., & Frey, N. (2015). Better than carrots or sticks: Restorative practices for positive classroom management. Alexandria, VA: ASCD.

USING QUESTIONS TO ENGAGE & ASSESS

Engaging students in the learning process is the job of the teacher. The problem is knowing what methods work best to ensure your students engage with the material. There are multiple ways to engage students in learning. In this chapter, we will look at the use of questioning that can be used to elicit the type of engagement from students that you desire.

Learning Objectives

By the end of this chapter, you will be able to:

- Describe the purpose of questioning.
- Explain components of effective questioning practices.
- Differentiate between open and closed questions.

- Use strategies to elicit student thinking such as:
    - Wait Time
    - Cold Call
    - No Opt Out

Questioning to Engage

The interaction between a teacher and learner is the most important feature of a classroom. Whether helping learners to acquire basic skills, develop understanding to solve problems, or to engage in higher-order thinking such as evaluation, a teacher's usage of questions within the learning cycle is crucial. For teachers, questioning is a key skill that can be learned and improved with practice and reflection. Research into questioning has given some clear pointers as to what works. These can provide the basis for improving classroom practice. A very common problem identified by the research is that pupils are frequently not provided with enough 'wait time' to consider an answer; another is that teachers tend to ask too many of the same type of questions. The focus of this section will be on developing foundational skills to equip you to ask

effective questions that help you engage students and elicit student thinking to inform your instruction.

Purpose of Questioning*

Teachers ask questions for a number of reasons, the most common of which are

- to interest, engage and challenge learners;
- to check on prior knowledge and understanding;
- to stimulate recall, activating existing knowledge and experience in order to create new understanding and meaning;
- to focus pupils' thinking on key concepts and issues;
- to help pupils extend their thinking from the concrete and factual to the analytical and evaluative;
- to lead pupils through a planned sequence which progressively establishes key understandings;
- to promote reasoning, problem-solving, evaluation and the formulation of hypotheses;
- to promote learners' thinking about the way they have learned.

The kind of question asked will depend on the reason for asking it. For example, questioning may also be used to bring a student's attention back to the task at hand, 'What do you think about that, Peter?' or 'Do you agree?' See Nathan Bond's

12 Questioning Strategies that Minimize Classroom Management Problems for ideas on how to use questions to engage learners. However, questions designed to elicit student thinking are often referred to as 'open' or 'closed.'

Closed questions, which have one clear answer, are useful to check understanding during explanations and recap sessions. If you want to check recall, you are likely to ask a fairly closed question, for example, 'What is the atomic number for Oxygen?' or 'What do we call this type of text?'

On the other hand, if you want to help pupils develop higher-order thinking skills, you will need to ask more open questions that allow learners to give a variety of acceptable responses. During class discussions and debriefings, it is useful to ask open questions, for example, 'Which of these four sources were most useful in helping with this inquiry?', 'Given all the conflicting arguments, where would you build the new superstore?', 'What do you think might affect the size of the current in this circuit?'

Summary of Research*

Questioning is one of the most extensively researched areas of teaching and learning. This is because of its central importance in the teaching and learning process. The research can be divided into two broad categories

- What is effective questioning?

- How do questions engage students and promote responses?

What is effective questioning?

Questioning is effective when it allows students to engage with the learning process by actively composing responses. Research (Borich 1996; Muijs and Reynolds 2001; Morgan and Saxton 1994; Wragg and Brown 2001) suggests that lessons, where questioning is effective, are likely to have the following characteristics

- Questions are planned and closely linked to the objectives of the lesson.
- The learning of basic skills is enhanced by frequent questions during guided practice sessions.
- Closed questions are used to check factual understanding and recall.
- Open questions predominate.
- Sequences of questions are planned so that the cognitive level increases as the questions go on.
- Students have opportunities to ask their own questions and seek their own answers. They are encouraged to provide feedback to each other.
- The classroom climate is one where students feel secure enough to take risks.

The research emphasizes the importance of using open, higher-level questions to develop students' higher-order thinking skills. There needs to be a balance between open and closed questions, depending on the topic and objectives for the lesson. A closed question, such as 'What is the next number in the sequence?', can be extended by a follow-up question, such as 'How did you work that out?'

In the video below, watch how the teacher uses questions to develop higher-order thinking skills. For an in-depth analysis, check out Doug Lemov's analysis of how a teacher stretches student thinking with open questions.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=81#oembed-1

Overall, the research shows that effective teachers use a greater number of higher-order questions and open questions than less effective teachers. However, the research also demonstrates that most of the questions asked by effective and less effective teachers are lower order and closed. It is estimated that 70–80 percent of all learning-focused questions require

a simple factual response, whereas only 20–30 percent lead students to explain, clarify, expand, generalize or infer. In other words, only a minority of questions demand that students use higher-order thinking skills. The mix of open and closed questions will, of course, depend on what is being taught and the objectives of the lesson. However, teachers who ask no open questions in a lesson may be providing insufficient cognitive challenges for students.

In this video, education expert John Hattie from the University of Melbourne elaborates on our understanding of why questions are an essential component of developing self-regulated learners.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=81#oembed-2

How do questions engage students and promote responses?

It doesn't matter how well-structured your questions are if your students do not respond. This can be a problem with shy or older students who are not used to highly interactive

teaching. It can also be a problem with students who are not very interested in school or engaged with learning. The research identifies a number of strategies that are helpful in encouraging student response. (See Borich 1996; Muijs and Reynolds 2001; Morgan and Saxton 1994; Wragg and Brown 2001; Rowe 1986; Black and Harrison 2001; Black et al. 2002.)

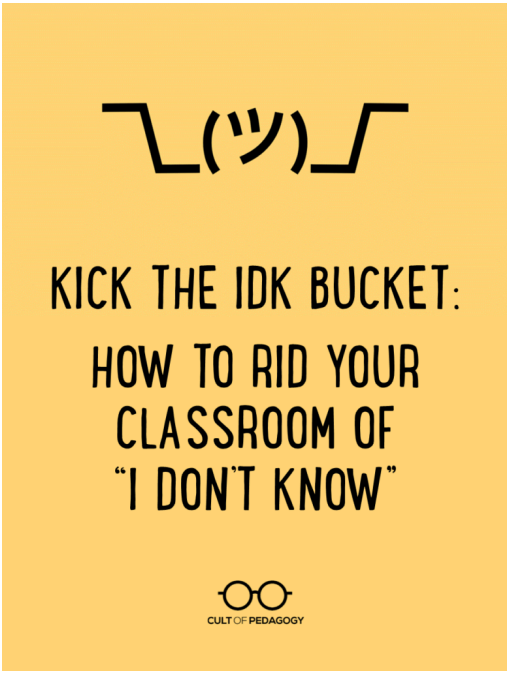
Student response is enhanced where

- there is a classroom climate in which students feel safe and know they will not be criticized or ridiculed if they give a wrong answer
- prompts are provided to give students the confidence to try and answer
- a 'no-hands' approach to answering, where you choose the respondent rather than have them volunteer. This is often referred to as cold calling.
- students who either do not know the answer or refuse to answer, are not allowed to opt-out of answering the question.
- 'wait time' is provided before an answer is required. The research suggests that 3 seconds is about right for most questions, more complex questions may need a longer wait time. Research shows that the average wait time in classrooms is about 1 second (Rowe 1986; Borich 1996)

Check out Connie Hamilton's blog post where she discusses strategies to get rid of the "I don't know" response in your classroom.

See It in Action: Addressing a Lack of Hands

Consider Doug Lemov's analysis of what a teacher does when they don't get many hands to engage more students during questioning.



Common Pitfalls and Possible Solutions*

Although questions are the most common form of interaction between teachers and students, it is fair to say that questions are not always well judged or productive for learning. This section identifies some common pitfalls of questioning and suggests some ways to avoid them.

Not being clear about why you are asking the question: You will need to reflect on the kind of lesson you are planning. Is it one where you are mainly focusing on facts,

rules, and sequences of actions? If that is the case, you will be more likely to ask closed questions that relate to knowledge. Or is it a lesson where you are focusing mainly on comprehension, concepts, and abstractions? In that case, you will be more likely to use open questions that relate to analysis, synthesis, and evaluation.

Asking too many closed questions that need only a short answer: It helps if you plan open questions in advance. Another strategy is to establish an optimum length of response by saying something like 'I don't want an answer of fewer than 15 words.'

Asking too many questions at once: Asking about a complex issue can often lead to complex questions. Since these questions are oral rather than written, students may find it difficult to understand what is required and they become confused. When you are dealing with a complex subject, you need to focus each question on one idea only. It also helps to use direct, concrete language and as few words as possible.

Asking difficult questions without building up to them: This happens when there isn't a planned sequence of questions of increasing difficulty. Sequencing questions is necessary to help students to move to higher levels of thinking.

Asking superficial questions: It is possible to ask lots of questions but not get to the center of the issue. You can avoid this problem by planning probing questions in advance. They can often be built in as follow-up questions to extend an answer.

Asking a question and then answering it yourself: What's the point? This pitfall is often linked to another problem: not giving students time to think before they answer. Use 'wait time' to give students a chance to respond. You could say 'Think about your answer for 3 seconds, then I will ask.' You could also provide prompts to help.

Focusing on a small number of students and not involving the whole class: One way of avoiding this is to get the whole class to write their answers to closed questions and then show them to you together. Some teachers use small whiteboards for this. Another possibility, which may be more effective for more open questions, is to use the 'no-hands' strategy, where you pick the respondent rather than having them volunteer. One advantage of this is that you can ask students questions at appropriate levels of difficulty. This is a good way of differentiating to ensure inclusion.

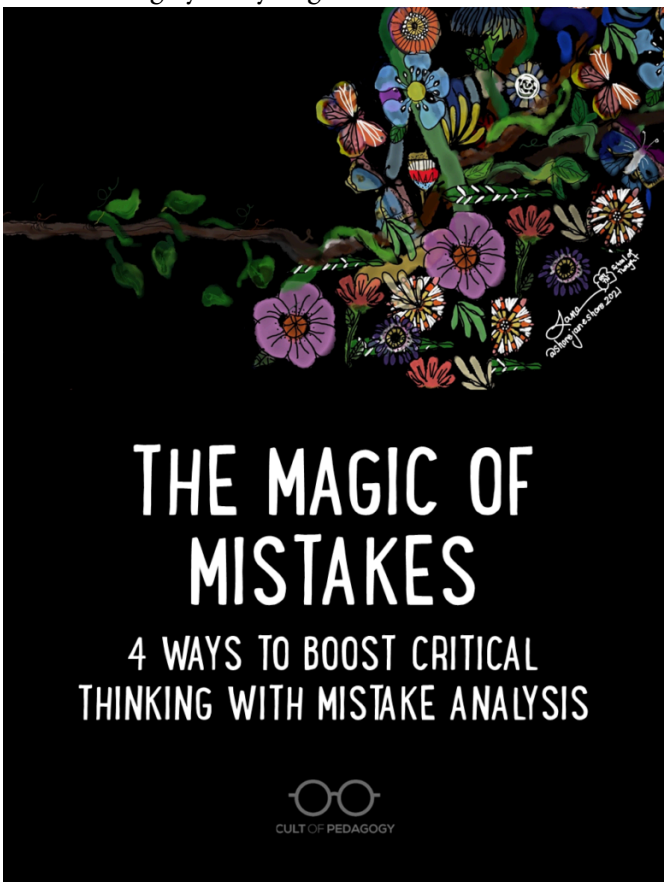
Check out Jennifer Gonzalez's blog post where she discussed the "Fisheye Syndrome" and provides strategies of how to avoid situations where only a handful of students answer questions.

Dealing ineffectively with wrong answers or misconceptions: Teachers sometimes worry that they risk damaging students' self-esteem by correcting them. There are ways of handling this positively, such as providing prompts and scaffolds to help students correct their mistakes.

Not treating students' answers seriously: Sometimes teachers simply ignore answers that are a bit off-target. They can also fail to see the implications of these answers and miss opportunities to build on them. You could ask students why

they have given that answer or if there is anything they would like to add. You could also ask other students to extend the answer. It is important not to cut students off and move on too quickly if they have given a wrong answer.

Check out Colin Seale's blog post where he discusses the "Magic of Mistakes" and provides strategies to boost student's critical thinking by analyzing mistakes.



Questions that Promote Critical Thinking*

To ensure that you are utilizing a balance of open and closed questions it is helpful to plan your questions in advance of a lesson. You may find that using a framework such as Bloom's Taxonomy to be a useful tool when designing questions. Here are some suggested prompts that align with Bloom's. Many are useful as follow-up probing questions that can be used to extend student thinking:

Remember: Exhibit previously learned material by recalling facts, terms, basic concepts, and answers.

- What is ...?
- When did ____ happen?
- How would you explain ...?
- Why did ...?
- How would you describe ...?

Tips from the Pros: Question Frames

Check out Mark Fisher's blog post about Question Frames. A variety of Question Frames can be found on the Internet. A key takeaway is that by tracking your use of questions, you might better inform your

planning of questions. Consider downloading one of the blank templates to evaluate your use of questions during your next teaching session.

Understand: Demonstrating understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions and stating main ideas.

- How would you compare ...? contrast.. ?
- Explain in your own words . . . ?
- What facts or ideas show ...?
- What evidence is there that...?

Apply: Solving problems by applying acquired knowledge, facts, techniques and rules in a different way.

- What examples can you find to . . . ?
- How would you show your understanding of...?
- What approach would you use to...?
- What might have happened if. . . ?

Analyze: Examining and breaking information into parts by identifying motives or causes; making inferences and finding evidence to support generalizations.

- What inference can you make from. . . ?
- How would you classify . . . ?
- How would you categorize ...?
- Can you identify the different parts...?

Evaluate: Presenting and defending opinions by making judgments about information, the validity of ideas or quality of work based on a set of criteria.

- How would you compare .....?
- Which do you think is better ...?
- Evaluate the contribution of ..... to .....
- What was the value or importance of ..... in .....?
- What would you have recommended if you had been .....?

Create: Compiling information together in a different way by combining elements in a new pattern or proposing alternative solutions.

- What might have happened if...?
- Can you propose an alternative interpretation to that of ..... . ?

Conclusion

Learning to ask effective questions and respond to student

thinking is a skill that takes effort and time to develop. To continue growing into an effective teacher, you can enhance your questioning skills by being intentional in the planning of your questions. Make efforts to align your questions to your learning objectives. Plan sequences of questions that lead your students to increasingly challenging cognitive levels of understanding. Lastly, monitor the types of questions you ask, how much wait time you provide, and how you call on students to share responses.

Summarizing Key Understandings

Self-Evaluation

Exercise: Use the self-evaluation tool below to assess your current efforts to establish a positive learning environment.

Establishing a Positive Learning Environment Component	Yes	No	Working on It
I provide multiple opportunities for students to respond.			
I use a variety of strategies to increase student opportunities to respond.			
I use wait time to increase student opportunities for thinking.			
I plan instructional questions and response methods prior to the lesson			

References & Attributions

Attribution: "Introduction" & "Purpose of Questioning" was adapted in part from Types of Question by ORBIT: The Open Resource Bank for Interactive Teaching, University of Cambridge, Faculty of Education, licensed CC BY-SA 4.0.

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COOPERATIVE LEARNING

Engaging students in the learning process is the job of the teacher. The problem is knowing what methods work best to ensure your students engage with the material. There are multiple ways to engage students in learning. In this chapter, we will look at grouping strategies that can be used to elicit the type of engagement from students that you desire.

Learning Objectives

By the end of this chapter, you will be able to:

- Describe the benefits of cooperative learning.
- Explain how to design, implement, and assess cooperative learning experiences.
- Use various grouping strategies such as:
    - Think-Pair-Share

- Reciprocal Learning
- Jigsaw

Cooperative Learning*

Cooperative learning is students working together to "attain group goals that cannot be obtained by working alone or competitively" (Johnson, Johnson, & Holubec, 1986). The main purpose of cooperative learning is to actively involve students in the learning process. It is a process that requires knowledge to be discovered by students and transformed into concepts to which the students can relate. Learning takes place through dialog among students in a social setting. Each team member is responsible for learning the material and also for helping the other members of the team learn. Dean et al. (2012) assert that positive interdependence and individual accountability are critical components of cooperative learning. Students must realize their effort is necessary for the group to be successful and that each individual will be held accountable for their contributions and meeting the learning goals.

Background*

Cooperative learning is a methodology that employs a variety of learning activities to improve students' understanding of a subject by using a structured approach that involves a series of steps, requiring students to create, analyze, and apply concepts (Kagan, 1990). Cooperative learning utilizes the ideas of Vygotsky, Piaget, and Kohlberg in that both the individual and the social setting are active dynamics in the learning process as students attempt to imitate real-life learning. By combining teamwork and individual accountability, students work toward acquiring both knowledge and social skills. It is a teaching strategy that allows students to work in small groups with individuals of various talents, abilities, and backgrounds to accomplish a common goal. As a result, they frame new concepts by basing their conclusions on prior knowledge. This process results in a deeper understanding of the material and more potential to retain the material.

Pre-implementation*

After deciding to implement cooperative learning (CL), the biggest challenge will be planning and preparing the classroom and students for CL. According to Johnson, Johnson, and Smith (1991), there are several tasks that an instructor must accomplish before implementing cooperative learning in the classroom. This section will detail those responsibilities.

Specify Instructional Objectives (academic and social) of CL. The instructor must explain why they are using CL, describe its benefits, and the expected results.

Determine Group Size and Assign Students to Groups. Group size can range from two to four students, depending on the CL task. These groups can be homogeneous or heterogeneous. Groups can be formed by putting students together who share common strengths, interests, etc., or they can be randomly assigned. Liljedhal (2014) argues that regular use of random groupings will decrease social barriers and the reliance on teachers for answers while increasing classroom engagement and the mobility of knowledge between students.

Arrange room. Instructors should optimize the space in their classrooms so that students/

Tips from the Pros: Visibly Random Groups

Check out Jon Orr's blog post Visibly Random Groups where he talks about using cards to assign students to random groups of three. He has generously provided a download option if you want to print and use his cards in your class.

groups can interact and move about the room easily. It is essential that a group's seats face one another.

Plan instructional materials to promote interdependence. The instructional methods and materials that an instructor chooses must allow each individual to contribute to the group's success in a unique and meaningful way. Without these unique contributions, a group's structure and cohesion will be put in jeopardy.

Assign group roles. There is some debate about whether or not the instructor should play a role in this decision. Whether or not an instructor chooses to assign roles within a group, they should ensure that each student has a distinct role. Also, the instructor should choose or assist the students in choosing roles that use their strengths and improve their areas of weakness. Instructors should also oversee that students do not choose the same role over and over again. Some of the roles that could be chosen or assigned include facilitator, recorder/reporter, checker (for understanding), summarizer, elaborator (on prior knowledge or discussion points), materials-runner, and wild card (does anything else that needs to be done). Sample role descriptions.

Assign task. When picking an assessment task (product to be produced), the instructor should choose one standard to address and match it to the learning approach. The cooperative learning group's task should be interesting, challenging, and motivating. It should also be a performance-driven and authentic task. The instructor should clearly

explain procedures for the task, provide structure (especially useful for inexperienced CL students), and set a specific time frame for each part and the whole task. Finally, the instructor should question the students to check for understanding of the task and its procedures.

Explain the criteria for success. The instructor should communicate the group-work skills that will be evaluated. A rubric could be created, possibly with the students' assistance, to evaluate the group-work skills as well as the assessment task. The goals of your CL task will determine if you need a formal or informal evaluation tool.

Structure positive interdependence and accountability. Group size should be kept small so that each member participates and contributes uniquely to the group. Instructors should also monitor groups and individuals by asking questions of both. A group should be asked to collectively explain its results and individuals should be able to defend their own position as well as the group's as a whole.

Specify desired behaviors. An essential part of cooperative learning's success is teaching students how to work in a group. To accomplish this, the instructor can conduct mini-lessons on ways to respect others (i.e. praise, taking turns, and shared decision-making). Students also need to be trained in conflict resolution.

Without students' complete understanding of the goals, objectives, and procedures, cooperative learning will not be a success.

Implementation*

After all the preparations, it is time to begin working. During the implementation phase of cooperative learning, the students play the most important role. Some of their tasks at this stage include:

- working together;
- listening to one another;
- questioning one another;
- keeping records of their work and progress;
- producing the assessment task (product);
- assuming personal responsibility/being involved in the group.

The instructor also has responsibilities during this stage as well. Johnson, Johnson, and Smith (1991) list several roles that an instructor has during the implementation of cooperative learning.

Monitor behavior. During cooperative learning, the instructor should circulate throughout the classroom, visiting each group. This is a great time to integrate formative assessment strategies such as questioning.

Intervene if needed. While circulating, they should intervene if the instructor notices any group conflict or off-task behavior. Small-group conflict should be resolved as soon as possible, and students should be shown how to prevent

problems in the future. The instructor might use a conflict resolution checklist to resolve the group's conflict. This checklist includes items such as explaining the importance of listening to everyone in the group, defining responsibilities, valuing each person's gifts, modeling excellence, and promoting humor. Having these listed on a handout for each group could prevent group discord and off-task behavior.

Assist with needs. While monitoring the groups' work, the instructor should assist groups with their needs. This might involve pointing out additional resources and/or points-of-view, and it also includes helping the students reflect on the work they have completed and their progress.

Praise. Students need to know if they are completing the assignment in a satisfactory manner, especially if they are inexperienced at working in cooperative groups. For this reason, the instructor should let individual students and groups know when they do something right or well.

Post-implementation*

Johnson, Johnson, and Smith (1991) give three jobs for the instructor to complete after the students have worked together to complete and submit the task.

Provide closure through summarization. The instructor should reconvene the entire group of students. At this point, the instructor can summarize the important points of the lesson/unit. Another suggestion is to have each group

summarize their work and points that they think were important. This helps the instructor to know exactly in which knowledge level the groups are working.

Evaluate students' learning. The instructor should use a rubric to grade/evaluate each group's assessment task. They should also be evaluated on their group work using a rubric. After the instructor has completed the evaluations, it is important that they provide feedback to the students about their product and their group performance. Without this information, the students will not be able to improve their cooperative learning skills. Remember, the goals of your CL task will determine if you need a formal or informal evaluation tool. If you are using informal grouping strategies that require students to engage in brief tasks that are either not submitted for evaluation or are used for formative assessment, then your evaluation process may be less formal as well.

Reflect on what happened. Instructors should keep a record of what worked and why it worked each time they undertook a CL lesson or unit. The instructor should also adjust their lessons based on the reflection and feedback of the students. This will prevent the stagnation of a CL unit; it will grow and change with each group of students.

Cooperative Learning Strategies*

The following is a non-exhaustive list of CL strategies.

Think-Pair-Share. Students discuss briefly with a partner. Best practices.

Reciprocal Learning. Pairs coach one another through practice sessions.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=90#oembed-1

3-review. The teacher gives teams 3 minutes to review/clarify what has been said.

Numbered heads. Group members are assigned a number. The group discusses as one, and then the instructor calls one number. The person with that number answers for the group.

Pinwheel Discussions. Variations in desk layouts can be used to promote discussion and support your expectations for active participation.

Concentric Circles (aka Speed Dating). Students sit facing each other in two concentric circles. The teacher poses a question for pairs of students to discuss. Partners switch as the teacher poses a new question.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=90#oembed-2

Team-pair-solo. Students do the problem(s) first as a team, then in a pair, and finally, solo.

Jigsaw. Students form expert groups to learn about a specific concept, then return to teach the concept to their homegroup. All students are assessed on all content.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=90#oembed-3

Structured problem-solving. Groups are given a problem to solve within a specified time. All members must agree and all must be able to explain the solution.

Chat Stations. Students have short discussions in groups as they move about the room.

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https://open.ocolearnok.org/teachingmethods/?p=90#oembed-4

Conclusion*

Cooperative learning promotes social interactions; thus students benefit in a number of ways from the social perspective. By having the students explain their reasoning and conclusions, cooperative learning helps develop oral communication skills. Because of the social interaction among students, cooperative learning can be used to model the appropriate social behaviors necessary for employment situations. By following the appropriate structuring for cooperative learning, students are able to develop and practice skills that will be needed to function in society and the workplace. These skills include leadership, decision-making, trust building, communication, and conflict management.

Summarizing Key Understandings

Self-Evaluation

Exercise: Use the self-evaluation tool below to assess your current efforts to establish a positive learning environment.

Establishing a Positive Learning Environment Component	Yes	No	Working on It
When designing a lesson, I consider student groupings, location, and activity level.			
I provide positive and corrective feedback while moving around the room.			
80% of my students can tell the classroom expectations and rules for cooperative learning activities.			

References & Attributions

Attribution: "Cooperative Learning," "Background," "Pre-Implementation," "Implementation," "Post-Implementation," "Cooperative Learning Strategies," and "Conclusion" sections were adapted in part from Emerging

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PLANNING INSTRUCTION & ASSESSMENT

IDENTIFYING LEARNING OUTCOMES

Lesson plans are a road map to facilitate teaching and learning. Lesson planning is an important aspect of effective teaching because it focuses the teaching on the students; however, lesson planning can seem overwhelming and laborious. In this section, you will learn about the process of ensuring alignment during lesson planning. Throughout the course, we will build on this foundation by adding different elements to enhance your lesson planning skills.

Learning Objectives

By the end of this section, you will be able to

- Unpack content standards.
- Write measurable learning objectives aligned to standards.

Backward Design

Grant Wiggins and Jay McTighe (2005) are often credited with the idea for lesson planning called Backward Design based on their book, Understanding by Design. Wiggins and McTighe maintain that the traditional pattern of planning for teachers resembles a "forward design" in which they consider the learning activities (what students will do), the assessments (how they will measure students), then conclude by connecting everything to learning goals and standards. Using the Backward Design approach helps teachers to align the intended student learning outcomes, to the assessment evidence, and then to the learning activities.

Tips from the Pros: Basics of Backward Design

The first step in the lesson design process is knowing where you want your students to end up. Successful teachers are diligent in their planning efforts, specifically when it comes to articulating the results they desire for their students. In the architecture

world, it is stated that form follows function. That principle means that before deciding on the shape of a new building, an architect should first understand how that building will be used. In the teaching world, successful teachers follow a similar idea in that they do not start planning their instruction until they have mapped a plan for where they are headed.

The second step of the Backward Design process requires you as the teacher to determine what form of evidence you will accept as evidence of student achievement of the learning objective. In this stage, you will either select or develop the assessment task that will provide the specific evidence you need. This step requires that you understand a variety of assessment types and their pros and cons in order to select the best format for your assessment (which will be addressed later in the course).

Read Jennifer Gonzalez's blog post about the Basics of Backward Design to see examples of where she went wrong early in her career and how to plan for success with your lessons. (Note: you can also listen to the podcast instead of reading the blog)

The last stage of the lesson design process focuses on planning the actual learning experiences. Now that we know where we want our students to end up, and ultimately do, we can effectively plan learning experiences that will prepare them to achieve our desired results. It is for this reason that backward design is considered to be a more intentional approach to lesson planning.

Tips from the Pros: A peek inside different teachers lesson planning processes

- Check out Megan Faherty's post (or listen to the podcast) about how she approaches lesson planning.
- If you are interested in seeing how I use Backward Design to layout the undergraduate course that goes along with this textbook, check out my EDUC 4353 Secondary Teaching Methods & Practices Course Alignment Matrix. In my alignment matrix, you can see how Stage 1 (objectives) and Stage 2 (assessments) align.

Approaches to Unpacking Content Standards

The following sections will review different methods to unpack content standards.

Backward Planning (Traditional)

Wiggins and McTighe (2005) suggest various methods to begin designing instruction, one of which is reviewing academic content standards. Content standards are typically developed to guide instructional decisions at the school level across a state or nation. According to the Oklahoma State Department of Education, the "Oklahoma Academic Standards serve as expectations for what students should know and be able to do by the end of the school year." The Oklahoma Academic Standards (OAS) are defined across content and grade levels. Wiggins and McTighe offer a few suggestions on how to use content standards to guide your planning.

- Look for the key nouns in the standards. (Group related standards together to better see which nouns are key.) Consider the big ideas implied by these nouns.
- Identify the key knowledge and skill called for by the content standards or benchmarks. Infer the related ideas

and understandings.

- Ask, what essential questions flow from or point to the standard? What important arguments and inquiries relate to the standard?
- Consider the key verbs; think of them as a blueprint for key performance assessments.
- List the activities that will enable performance and will develop the ability to understand the big ideas. (Wiggins & McTighe, 2005, p. 256)

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=48#oembed-1

An interactive H5P element has been excluded from this version of the text. You can view it online here:
https://open.ocolearnok.org/teachingmethods/?p=48#h5p-9

Unpacking Grade Level Outcomes (GLO's)

There are a variety of ways to unpack content standards. Wiggins and McTighe (2005) suggest using a template (as seen in the See It In Action: Unpacking Academic Standards video above) that focuses on identifying key questions, understandings, and facts. If your content area is more heavily focused on the demonstration of skills, or you are looking for a different approach, then one of the following suggestions might work better for you. The key to remember is that backward planning is not about a specific format or template, instead it is about clearly defining your desired outcomes and aligning your approach.

The following resources provide a similar approach to unpacking standards from a physical education perspective. The first approach narrows in on individual Grade Level Outcomes (GLO's) and looks for key components. The approach to unpacking the standards could be adapted to work within any academic content area. Consider reviewing some of the resources below to see how the principles can help you identify desired outcomes for your learning experiences.

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https://open.ocolearnok.org/teachingmethods/?p=48#h5p-11

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https://open.ocolearnok.org/teachingmethods/?p=48#oembed-2

To review the final unpacking in detail, check out Unpacking GLO's: Pickleball Unit.

Standards Breakdown

A third approach to breaking down your academic standards uses Wiggins and McTighe's (2005) suggestion to look for key nouns and verbs. The following steps may give you some ideas on how you might break standards down by focusing on key words and phrases.

1. Identify any established Objectives related to your chosen topic for your unit of learning;
2. Look for Key Words and Phrases
    1. Identify key words that define the action students should be doing. Boldface these in a particular color (ie. blue), so they stand out.
    2. Identify key phrases or words that define concepts, topics, or knowledge that students need to know. Bold-face these in a different color (ie. orange), so they stand out.
    3. Identify any secondary actions or descriptions that provide further details about how students are expected to perform the action identified earlier. Highlight these sections for easy reference.
3. Identify what you hope students will KNOW at the end of the learning experience. Include a brief description for each of the key words/phrases identified in the previous step (2b).
4. Describe what you want your students to be able to DO at the end of the unit. These objectives should be statements that link the action identified in the previous section (2a) with individual pieces of knowledge (2b) and secondary actions (2c).

7.RP.A.2 Standard Breakdown Video Coming Soon!

To review the final breakdown in detail, check out 7.RP.A.2 Standard Breakdown

Learning Objectives*

When planning lessons, GOALS describe the lesson's summative outcomes (broad statements about where students will go) and the OBJECTIVES describe exactly what students will do to get there. Check out the video below (approx. 9 min) for a brief overview of how to write strong learning objectives.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=48#oembed-3

As described in the video, you should consider the SMART attributes when writing objectives:

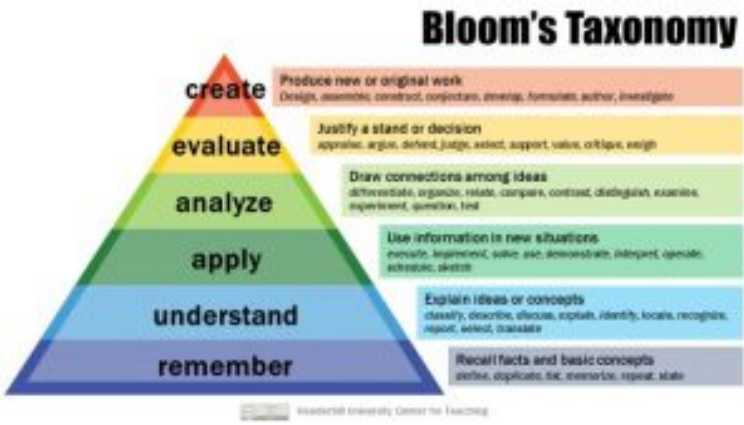
S-Specific

Learning objectives should be concise, well-defined statements of what students will know, understand, and be able to do at the end of the lesson. The objective should state exactly what is to be accomplished by the student and the conditions in place, such as, "Given a topic on American history", "Provided with

a calculator and a three-minute time limit", or "Independently, following the five-step scientific method". Learning outcomes should be simply stated in student-centered terms. If students are aware of the intended outcome, then they know where their focus should lie. This clarity helps decrease anxiety about their ability to succeed and helps build intrinsic motivation.

M-Measurable

Learning objectives must be quantifiable. Measurable objectives state the outcomes that can be assessed in definite and specific ways; the quality or level of performance that will be considered acceptable. The criterion can be expressed by describing the performance standard to be met, such as, "Write a descriptive paragraph that includes a topic sentence, three supporting detail sentences, and a closing sentence." When writing mastery level, you often begin with the word "with", then add a description, such as "90% accuracy", "no errors", "appropriate punctuation" or "accurate vocabulary". Start with behavioral verbs (action verbs) that can be observed (either informally or formally) and measured. Using concrete verbs will help keep your objectives clear and concise. Bloom's Taxonomy provides a list of such verbs and these are categorized according to the level of achievement at which students should be performing.



While the verbs above clearly distinguish the action that should be performed, there are verbs to avoid when writing a learning objective. The following verbs are too vague or difficult to measure: appreciate, cover, realize, be aware of, familiarize, study, become acquainted with, gain knowledge of, comprehend, know, learn, and understand.

A-Attainable

Learning objectives should be written at the appropriate developmental level for student success. It is essential that students have the prerequisite knowledge and skills and that the lesson's time frame supports the achievement of the objective. You can determine the appropriate level of challenge by referring to pre-assessments. Learning activities should be challenging, yet offer students a realistic chance to master the objective.

R-Relevant

The skills or knowledge described must be appropriate for the grade level and subject area or an individual's IEP goals. The process of setting learning objectives begins with knowing the specific standards, benchmarks, and supporting knowledge students in your school or district are required to learn. State standards (Oklahoma Academic Standards) and curriculum documents are the sources for this information. This is essential to ensure students receive the same content from teacher to teacher.

T-Time-bound

State when students should be able to demonstrate skill ("By the end of the lesson").

Conclusion

Lesson planning is a critical part of becoming an effective teacher regardless of your discipline. Using models like Backward Design help teachers align their objectives, assessments, and learning experiences. The key to ensuring student success is to start with a clear end goal. Learning objectives define that goal for the teacher and the student. In the coming sections, we will look at how to use your learning

goals to design your assessment tools and plan your instruction.

Summarizing Key Understandings

An interactive H5P element has been excluded from this version of the text. You can view it online here:
https://open.ocolearnok.org/teachingmethods/?p=48#h5p-12

Peer Examples

An interactive H5P element has been excluded from this version of the text. You can view it online here:
https://open.ocolearnok.org/teachingmethods/?p=48#h5p-13

References & Attribution

Attribution: "Learning Objectives" section was adapted in part from GSC Lesson Planning 101 by Deborah Kolling and Kate Shumway-Pitt, licensed CC BY-SA 4.0

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Media Attributions

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PLANNING ASSESSMENTS

Assessment is a critical component of the instructional planning process and should have a prominent role in the learning process. This means that teachers should plan to integrate multiple forms of assessment and use the data to understand how well their students are learning the content and skills specified by the learning objectives. An assessment used during the learning process is referred to as a formative assessment. In this section, you will learn about the second stage in the Backward Design process of ensuring alignment between your learning objectives and your assessment plan.

Learning Objectives

By the end of this chapter, you will be able to:

- Determine acceptable evidence of student

learning; and
- Select and/or design formative and summative assessments aligned with learning objectives to support, verify, and document learning.

Stage 2: Determining Acceptable Evidence

Now that we understand the value of having clear learning objectives, we can start to look at the second stage of the Backward Design model (Wiggins & McTighe, 2005) where we determine what types of evidence will be acceptable to demonstrate that our students have met our goals. When considering potential evidence, Popham and Baker (1970) contend that teachers must develop skills to differentiate between different types of practice to ensure that the evidence they collect aligns with their stated learning objectives. The assessment piece you choose, whether it be a quiz, assignment, essay, test, or project, will provide you with evidence of student learning. However, Popham and Baker suggest that you should evaluate what you are asking students to do based on the following practice types:

- Equivalent: practice the specific desired objective
- Analogous: practice is similar to the desired objective but not identical.
- En-route: skill needed before performing the desired objective
- Irrelevant: any practice or activity that does not align with the desired objective

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=109#oembed-1

Recognizing what type of practice you are requiring students to engage in will help guide your selection, adoption, and creation of assessments in stage 2 of the Backward Design process. The key to remember is that students should be given the opportunity to practice the specific skill(s) defined by your learning objectives (Popham & Baker, 1970). This second stage requires that you understand the differences between formative and summative assessment which is foundational information necessary to ensure you provide practice and feedback for your students during the learning process. In addition, we will investigate a variety of assessment types and

their pros and cons in order to select the best format for your assessment.

Formative Assessment

Formative assessment includes all the practices teachers use to check student understanding throughout the teaching and learning process. Often, formative assessment is said to be an assessment ***for*** learning.

Definition of Formative Assessment*

Formative assessment refers to the ongoing process teachers and students engage in when selecting a learning goal(s), determining student performance in relation to the goal, and planning steps needed to move students closer to the goal. This ongoing process is implemented through informal

Examples (Sidebar)

For an in-depth look at formative assessment beyond what is discussed in this textbook, check out the series of videos by Dr. Heidi Andrade of the University at Albany about

designing valid formative assessment tools.

assessments, assessments that can easily be incorporated into day-to-day classroom activities. Informal assessments are content and performance-driven and include questioning students during a discussion, student work (exit slips; assignments), and direct observation of students working. Rather than being used for grading, formative assessment is used to inform instructional planning and to provide students with valuable feedback on their progress. Formative assessment data can be collected as a pre-assessment, during a lesson, or as a post-assessment at the closing of a lesson.

In the video below, Rick Wormeli, author of Fair Isn't Always Equal and Differentiation, explains the difference between summative and formative assessment and how formative assessment helps you offer better feedback to your students.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=109#oembed-2

Listen to Jeoy Feith and Terri Drain discuss what assessment for learning in a PE setting looks like (show notes available if you what to read instead).

Adjusting Instruction Based on Formative Assessment*

Using assessment information to adjust instruction is fundamental to the concept of assessment for learning. Teachers make these adjustments "in the moment" during classroom instruction as well as during reflection and planning periods. Teachers use the information they gain from questioning and observation to adjust their teaching during classroom instruction. If students cannot answer a question, the teacher may need to rephrase the question, probe understanding of prior knowledge, or change the way the current idea is being considered. Teachers need to learn to identify when only one or two students need individual help and when a large proportion of the class is struggling so whole group intervention is needed.

After the class is over, effective teachers spend time analyzing how well the lessons went, what students did and

did not seem to understand, and what needs to be done the next day. Evaluation of student work also provides important information for teachers. If many students are confused about a similar concept, the teacher needs to re-teach it and consider new ways of helping students understand the topic. If the majority of students complete the tasks very quickly and well, the teacher might decide that the assessment was not challenging enough.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=109#oembed-3

Formative Assessment Strategies

Tips from the Pros: Strategies to Try

Selecting and administering assessment techniques that are appropriate for the goals of instruction as well as the developmental level of the students is a crucial component of effective formative assessment. Teachers need to know the

characteristics of a wide variety of classroom assessment techniques and how these techniques can be adapted for various content, skills, and student characteristics (Seifert, 2011). There is a vast array of formative assessment strategies that have been proven to be effective. For example, Natalie Reiger has compiled a list of 60 formative assessment strategies along with guidance on how to use them successfully in the classroom. Finding different strategies to try has never been easier as dozens of books have been written on the topic and hundreds of videos have been posted online demonstrating effective strategies. The key is not knowing all the possible formative assessment strategies but being able to distinguish which strategy best fits your assessment needs.

Wondering where to begin? Check out Gretchen Vierstra's blog post where she has suggested a variety of formative assessment strategies that you can use today, tomorrow, and next week.

Technology & Formative Assessment*

See It in Action: Assess in Real-Time

Using Tech Tools for Formative Assessment

Technology is a powerful ally for teachers, especially in measuring student learning. With digital formative assessments, teachers can expedite their ability to assess and provide student feedback in real-time. Timmis, Broadfoot, Sutherland, and Oldfield (2016) encourage teachers to reflect on the "four C's" when using technology to enhance a lesson. Ask yourself, does technology allow for increased collaboration or critical thinking opportunities? Are students able to communicate their ideas uniquely and are students able to demonstrate creative thinking? Following this format provides lessons that foster student engagement, with technology as an enhancement tool. Digital formative assessments provide teachers the opportunity to give individual feedback quicker and in real-time compared to traditional non-digital paper and pen formative assessments.

Educators now have access to a variety of tools that allow for instant feedback. Google Forms, Socrative, Kahoot, Quizziz, Plickers, Formative, PollEverywhere, Edpuzzle, Nearpod, and Quizlet are all educational technologies that allow teachers and

students to attain instant results on the learning taking place. The students may access the system using a variety of different technological tools including a learning management system (LMS) or a mobile device.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://open.ocolearnok.org/teachingmethods/?p=109#oembed-4

Teachers can have students work through retrieval practice together (such as when using a polling tool like PollEverywhere or a game-like tool like Kahoot). There are also educational technology tools that are more self-paced and provide opportunities for learners to work at their own pace. Many of these services are starting to allow for either approach to be used. Quizlet flashcards and some of their games such as Scatter,

Tips from the Pros: Assessment with Plickers

Looking for a quick and easy way to assess your students without devices in everyone's

hands? Read how Joey Feith uses Plickers in his PE classroom. This strategy could easily be adapted for all content areas.

- Part I
- Part II

Match, and Gravity can be used in a self-directed way by students. Quizlet also has a game called Quizlet Live that can be used with a group of students at one time for retrieval practice. Beyond assessment, teachers can utilize student devices, typically smartphones, to enhance learning in a variety of ways.

Exit Tickets

Exit Tickets are a great way to practice the backward design model on a small scale. Exit Tickets are brief mini-assessments aligned to your daily objective. Teachers can provide their students a short period at the end of the class session to complete and submit the Exit Ticket. By considering the content of the Exit Ticket before planning, teachers can ensure that they address the desired skills and concepts during their lesson. Teachers can then use the evidence gathered from Exit Tickets to guide future planning sessions for remediation purposes.

See It in Action: Exit Tickets

Check out this resource from the Teacher Toolkit website. They provide a video of a teacher using Exit Tickets and tips on how and when to use Exit Tickets.

Summative Assessment*

Summative assessments evaluate student learning, skill acquisition, and academic achievement at the conclusion of a defined instructional period—typically at the end of a project, unit, course, semester, program, or school year. Often, summative assessment is said to be an assessment of learning. Generally speaking, summative assessments are defined by three major criteria:

- Tests, assignments, or projects determine whether students have learned what they were expected to learn. In other words, what makes an assessment "summative" is not the design of the test, assignment, or self-

evaluation, per se, but the way it is used—i.e., to determine whether and to what degree students have learned the material they have been taught.

- Summative assessments are given at the conclusion of a specific instructional period, and therefore they are generally evaluative, rather than diagnostic—i.e., they are more appropriately used to determine learning progress and achievement, evaluate the effectiveness of educational programs, measure progress toward improvement goals, or make course-placement decisions, among other possible applications.
- Summative assessment results are often recorded as scores or grades that are then factored into a student's permanent academic record, whether as letter grades on a report card or test scores used in the college admissions process. While summative assessments are typically a major component of the grading process in most districts, schools, and courses, not all assessments considered to be summative are graded.

Some of the most well-known and widely discussed examples of summative assessments are the standardized tests administered by states and testing organizations, usually in math, reading, writing, and science. Other examples of summative assessments include:

- End-of-unit or chapter tests.

- End-of-term or semester tests.
- Standardized tests are used for school accountability, college admissions (e.g., the SAT or ACT), or end-of-course evaluation (e.g., Advanced Placement or International Baccalaureate exams).
- Culminating demonstrations of learning or other forms of "performance assessment," such as portfolios of student work that are collected over time and evaluated by teachers or capstone projects that students work on over extended periods and that they present and defend at the conclusion of a school year or their high school education.

It should also be noted that districts and schools may use "interim" or "benchmark" tests to monitor the academic progress of students and determine whether they are on track to mastering the material that will be evaluated on end-of-course tests or standardized tests. Some educators consider interim tests to be formative since they are often used diagnostically to inform instructional modifications, but others may consider them to be summative. There is an ongoing debate in the education community about this distinction, and interim assessments may be defined differently from place to place.

DEVELOPING RUBRICS & SCORING GUIDES

RESPONDING TO STUDENT NEEDS

PLANNING INSTRUCTION & LEARNING EXPERIENCES

SCORING & GRADING PRACTICES

This is where you can add appendices or other back matter.