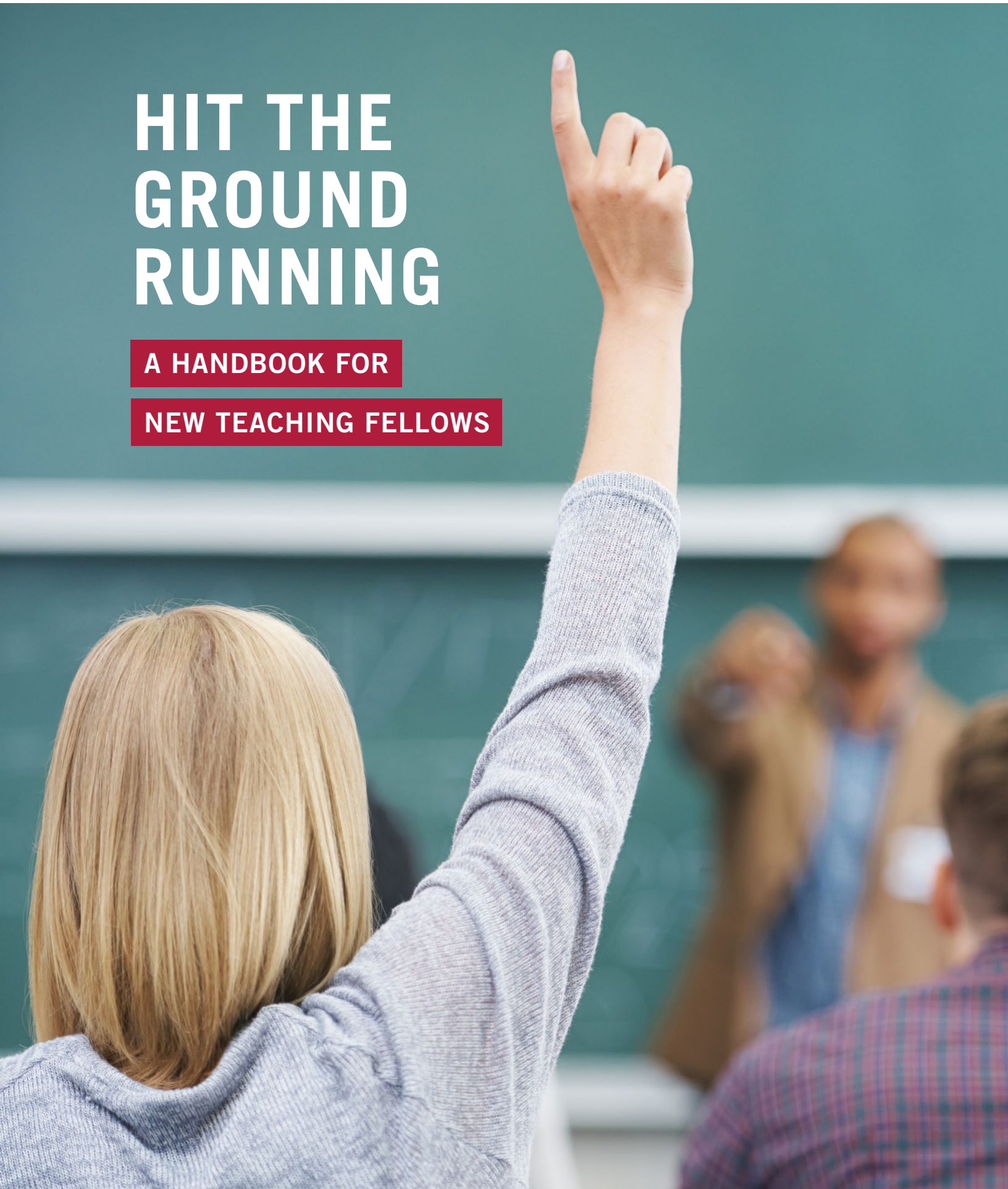
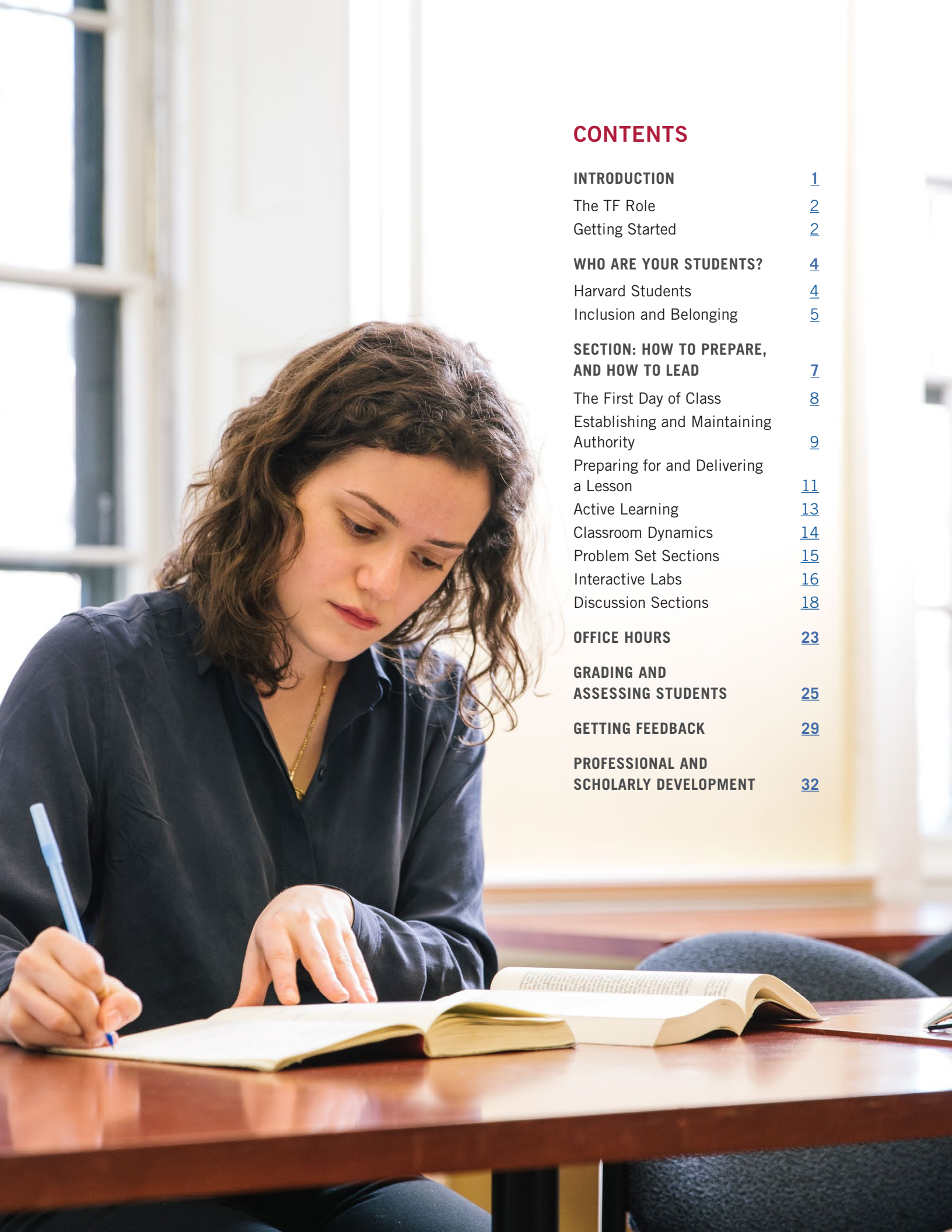
HARVARD | THE DEREK BOK CENTER FOR TEACHING AND LEARNING

HIT THE GROUND RUNNING

A HANDBOOK FOR NEW TEACHING FELLOWS





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INTRODUCTION

So you're going to be a Teaching Fellow (TF)! Congratulations on entering this important phase of your graduate studies.

Whether you are excited, anxious, or ambivalent about teaching, you may have many questions, such as:

- **What are the expectations of my role?**
- **Who are my students?**
- **What will I teach and how will I teach it?**
- **How will this factor into my career beyond Harvard?**

No matter what questions you have, this guide is designed to provide a brief introduction to teaching at Harvard, and to help you gain confidence and get prepared for your teaching duties so you can, as the title suggests, hit the ground running.

This guide is designed to help you gain confidence and get prepared for your teaching duties so you can, as the title suggests, hit the ground running.

This is a general guide designed for new TFs in all disciplines. You will need to find out more about your own teaching duties through your departments and programs, which may also offer discipline or program-specific teaching resources. Each section of this guide provides a brief overview of a specific teaching topic, practical strategies you can implement in your teaching, and further resources for your professional development. **Since this guide is very much an introduction to teaching, if you want to learn more, we encourage you to visit the Derek Bok Center for Teaching and Learning and consult the resources suggested for deeper explorations.**

THE TF ROLE

For many students, the TF is the teacher with whom they have the most contact. While the professor's lectures will introduce content and hopefully inspire and stimulate students' curiosity about a field, it is in your sections that students will test their understanding, raise questions, and explore the implications of what they are learning. Your role is to generate an intellectually stimulating and productive atmosphere, give feedback on students' learning and performance, and guide them as they explore ideas. Since you meet with the students in small groups, you may be in a better position than the professor to see exactly how and when they are flourishing or struggling. Students may find you more approachable than the professor, so you may be asked for help more often.

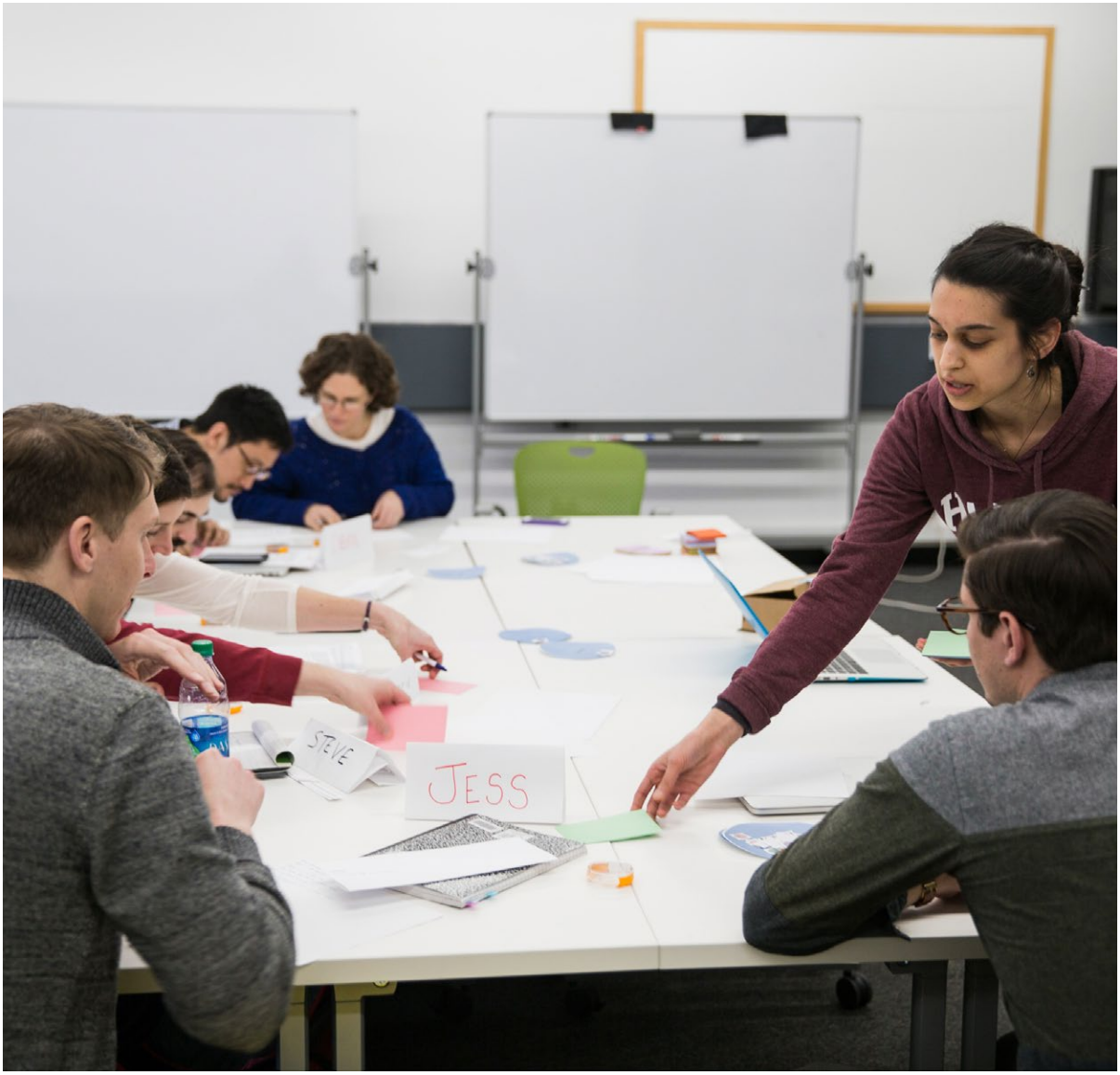
As a TF, you play an important role not only in engaging students with the content of the course, but also in making visible to them the conventions of your discipline and what is exciting about your field. Sometimes students will want or need a bit of framing which neither the syllabus nor the course head has supplied. Why do scholars in this field write this way? Who decided that this was the interesting question to ask? Simply by virtue of being a graduate student, you may be in the best position to explain how or why a course is doing what it's doing: faculty may be too expert to be aware of their own process, and undergraduates are probably not expert enough. Sometimes when your students seem stuck, a two-minute story about how "some person fifty years ago wrote an article about X, and ever since then everyone has been obsessed with X, and so that's why we're discussing X this week" can be truly revelatory. Don't hesitate to share with your students what got you into the field and what specifically you're excited about, as this will help you connect with and inspire them.

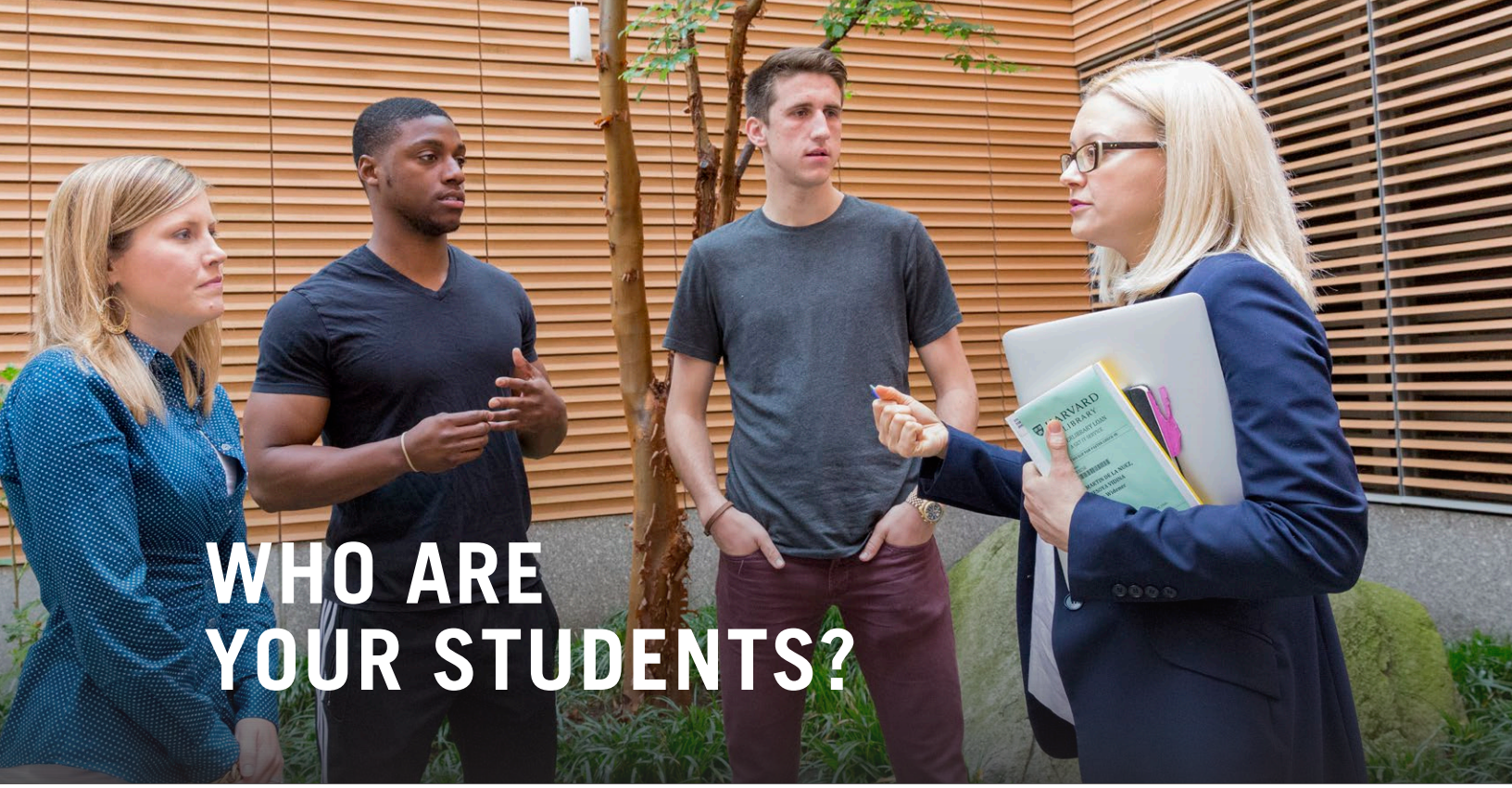
Your role is to generate an intellectually stimulating and productive atmosphere, give feedback on students' learning and performance, and guide them as they explore ideas.

GETTING STARTED

- **Establish your teaching support network.** Identify relevant resources in your departments and at the Bok Center. Connect with peers, TFs, professors and departmental staff who can help you in your role.
- **Gather as much information as you can about the course you are teaching.**
  - » Talk to the course head and learn about your role and what the expectations are.
  - » Talk to previous TFs, and find out which students take this course and why.
  - » Look at the syllabus and determine the course goals and learning outcomes, and review the requirements, materials, assignments, and policies on grading.
  - » Attend the professor's lectures to see what material is covered and how, and to observe how well the students seem to be grasping it.
  - » Visit the room in which you will teach to get a sense of how you and your students will use the space. Make sure you have all of the equipment you might need. Write on the board or try out the projector and stand at different parts of the room to learn about the student perspective. Ensure that the space is accessible. Know where the nearest bathrooms are. Take note of emergency exits or other safety issues, especially in a lab.

- **Get excited!** What brought you to your field? Why should your students care about your discipline? Be curious about what students want to get out of the course. Reflect on the most interesting things about the specific course you are teaching.
- **Start thinking about your professional development plan.** This might be basic at first, such as gathering information and taking the time to learn about your role. If you're feeling eager, one easy documentation exercise to implement could be to quickly jot down a response to the following after each session: What worked? What didn't, and how might it be improved?
- **Put a lot of thought into your first class.** It is the most significant in setting a tone for the semester. *See more on this in The First Day of Class on page 8.*





WHO ARE YOUR STUDENTS?

Getting to know your students enhances your ability to create a successful learning environment.

In the process of getting to know them, you are building rapport and communicating that you care about them and their success. Additionally, knowing about their backgrounds and interests allows you to tailor your approaches in ways that are more accommodating. For example, if you find that there is a great discrepancy among the class in background knowledge, you may be able to arrange students into groups to help each other. Moreover, knowing the disciplinary backgrounds of students enables you to draw on their respective disciplines when choosing examples to use in section.

HARVARD STUDENTS

For a big picture view of who Harvard students are, you can explore the *Crimson*'s freshman survey of graduating classes over the last few years at features.thecrimson.com/2015/freshman-survey/makeup. This data is general, but can help you recognize just how diverse the Harvard student population is. For example, the graduating class of 2019 reported the same percentage of first generation students (i.e., students who are the first to go to college in their family) as legacy students (i.e., students who had at least one parent who went to Harvard). Data like this can help break any misconceptions of Harvard students. In addition, you can learn the types of high schools Harvard students attended. Some went to highly rigorous private schools, others attended public schools in low income areas, and still others were homeschooled. Student academic backgrounds will vary and it will be evident that some students are more prepared than others. TFs should, therefore, expect a diverse group of students.

INCLUSION AND BELONGING IN THE CLASSROOM

Students should have equal opportunities for success, regardless of their race, ethnicity, sexual orientation, gender, religion, linguistic or socioeconomic background, and more. We all walk into the classroom with expectations and norms that have been established and cultivated by the communities and cultures from which we come; and some identities, cultures, and backgrounds (of both students and teachers) have more power and privilege than others in traditional college classrooms. Addressing potential challenges in the classroom related to power and privilege is a hugely complex and fraught issue, and many questions emerge: how do these issues affect learning? the classroom environment? your position as a TF? There are ongoing and evolving discussions on these themes. For now, as a new teacher, what can you do to promote equity in the classroom while working to teach effectively? You may notice variations on the following strategies in different sections of this handbook; teaching approaches that address the needs of students with a variety of backgrounds and abilities are ultimately "good" teaching.

INCLUSIVE TEACHING STRATEGIES

- **Get to know your students.** Ask your students to share with you why they are taking the course and what they hope to get out of it. Find out about their previous experience with the subject. Learn their names. Encourage office hours by making one visit mandatory in the first month.
- **Build rapport among the group.** Give your students opportunities to interact with each other. Ask them to move around and work with different partners throughout a session. This is especially important for discussion classes, or sections that require a lot of participation; be sure to start with icebreakers to help the group feel comfortable. It can be as simple as having students introduce themselves to a partner and then introduce their partner to the larger group.
- **Assess early and often.** Assessment does not always have to be in the form of high-stakes midterms, exams or papers, but rather can be simple check-ins throughout a semester. There are a number of low-stakes techniques that are easily implemented and provide you with quick information. For example, collect student information using index cards or polling software. You can ask them to write answers to brief background knowledge questions to get a sense of where they are starting. Once or twice throughout the semester, ask students to anonymously write and pass in the muddiest point, or most confusing part, of the section. *See more on these assessment techniques in the Grading and Assessing Students section on page 25.*
- **Vary teaching strategies.** Rather than simply lecturing or running through a problem set, mix things up by getting students to come up with an answer as a group at their given table, or have students come to the board to provide an answer. For discussions, try to have students talk in pairs or smaller groups before opening up to the whole group. Be mindful of the various ways you present information. Some ways work for some, but not others. Consider using a combination of board work, slides, relevant videos, comics, etc. There are many ways to mix things up.

***DEFINITION:* INCLUSIVE TEACHING STRATEGIES**

Inclusive teaching strategies can be used by instructors in an effort to create inclusive, or equitable, classrooms in which all students feel recognized, valued, and empowered.

- **Diversify course materials.** Evaluate course content (e.g., readings, images, examples) for diversity. Are multiple groups and identities represented and respected? Find ways to articulate that there is a place for diverse backgrounds in your discipline. For example, draw on diverse scholars and showcase their successes.
- **Allow students to demonstrate their learning in various ways, when possible.** Some students excel at articulating arguments in class, others may share deep insights during office hours. Encourage development in all areas, but be open to and acknowledge students' ability to demonstrate their grasp of material in various ways.
- **Be explicit.** Be careful not to assume that your approach is obvious to everyone. Provide a rationale for what you are doing. Let students know what they need to do to be successful in the course. Familiarize yourself with resources that can help them develop the study skills they may need, such as the Bureau of Study Counsel at bsc.harvard.edu.
- **Address incivility.** It is important to address classroom incivility as soon as possible as it can have negative impacts on the classroom environment and student learning.
- **Be mindful of language.** Model for your students the use of inclusive language in their writing and speaking (e.g., use "humanity" rather than "man"). Acknowledge evolving conventions regarding the use of pronouns in English. Keep in mind that the examples we use in teaching are often culturally-based, and can be alienating to students if they lack familiarity with them.

RESOURCES

BOOKS

hooks, b. (2014). *Teaching to Transgress.* New York, NY: Routledge.

Steele, C. M. (2010). *Whistling Vivaldi: And Other Clues to How Stereotypes Affect Us.* New York, NY: WW Norton & Co.

Wlodkowski, R. J., & Ginsberg, M. B. (2009). *Diversity & Motivation: Culturally Responsive Teaching, 2nd Edition*. San Francisco, CA: Jossey-Bass.

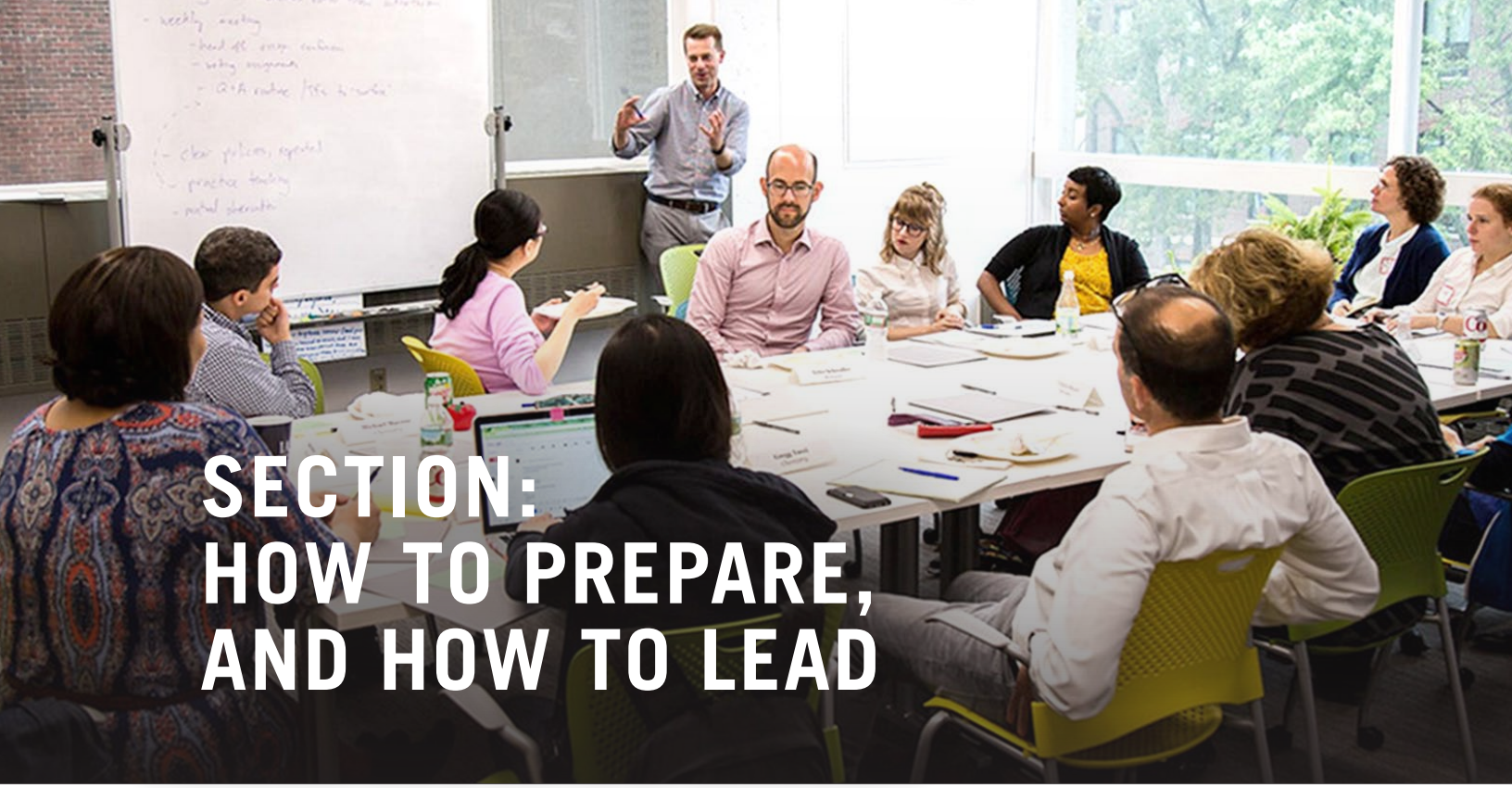
WEB RESOURCES

Universal Design. Universal design is an approach that aims to create learning experiences and environments that are inclusive of a range of abilities in a classroom. Learn more at udlcenter.org/implementation/postsecondary.

Harvard Crimson Freshman Survey. This survey is self reported data from each incoming freshman class. With around a 70% response rate, it provides an interesting overview of Harvard undergraduate student backgrounds. Read more at features.thecrimson.com/2016/freshman-survey.

BOK CENTER RESOURCES

Bok Seminars. Several Bok Seminars offer opportunities for TFs to explore the language and culture of the classroom, including *Intercultural Communication for Teachers and Scholars* and *Teaching with Purpose: A Critical Pedagogies Reading Group*. Visit the Bok website to learn which seminars are being offered each semester to find one that works for you.



SECTION: HOW TO PREPARE, AND HOW TO LEAD

Sections are an opportunity for students to engage further with the content of the professor's main lecture.

Some professors are very specific about what they want TFs to do, to the point of writing out the problems to be solved in section or specifying discussion questions. Others give their TFs a great deal of independence. In order to determine what to teach and how to teach it, connect with the course head or the Head TF. You also should clarify the responsibilities of your role, whether or not you must attend the main lecture, the overall learning goals of the course, the assessments students are expected to complete, and what guidelines or rubrics exist for grading.

A variety of factors may determine the turnout of your section. Some sections are mandatory, while others are not. If your section is mandatory, then it may be easier to prepare since you know how many students to expect. For those sections that are not mandatory, you may see variations in the attendance. The time of your section, a preference for instructor, and the due dates for major assignments play into the decision for students to attend section. In any case, sections should be an opportunity for students to engage with the course content beyond the lecture in order to enhance their learning. In what follows, we offer some strategies for preparing for and running a section.

Sections should be an opportunity for students to engage with the course content beyond the lecture in order to enhance their learning.

THE FIRST DAY OF CLASS

The first day of class sets the tone for the rest of the semester. The following suggestions may help you establish good rapport and a productive learning environment on the first day.

- **Introduce yourself.** What are you studying at Harvard, what do you find genuinely interesting about this course, and what are some of your other interests?
- **Get students hooked.** This can be as simple as putting up a comic that relates to your field, explaining what questions your field attempts to answer, or connecting the material to everyday life.
- **Get to know one another.** The first day is an obvious time to do icebreakers, but because it takes time for a group to get to know each other, consider doing small icebreakers for the first few sessions.
- **Encourage students to use each other's names.** One way to do this is to have students make name tents by writing their names on both the front and back sides of paper sheets folded horizontally that can sit in front of each student for the first few sessions.
- **Start with the course content as soon as possible.** Work through a specific problem or piece of material that illustrates what the course asks of students and what it has to offer them. Engaging students in actual work during the first class communicates seriousness of purpose and gives students (especially those who are still shopping around) an idea of what your class will be like.
- **Let students know how to contact you.** What are your communication preferences? Give them your office hours and contact information. Specify your policy for replying to emails (e.g., within 24 hours), your policy for outside-office hours and any times when you are not available.
- **Communicate expectations.** Convey your expectations and the expectations of the course as a whole by addressing some or all of the following:
  - » What approach does the course take to the subject?
  - » What is the role of the section in relation to the other components of the course?
  - » What kind of preparation is expected?
  - » Is attendance required?
  - » In what ways will students be expected to participate? How can they best listen to and speak with each other and with you?
  - » How will section run? Will you be distributing study questions, doing in-class writing, working in small groups, etc.? Will there be individual or group presentations?

TIP:

SAMPLE ICEBREAKER

Here is an example icebreaker that gets everyone talking and allows you to collect student information.

Ask everyone to introduce themselves to a partner or small group and share why they are taking this class. Pass out index cards and ask students to write their names on them and answer the following questions: Why are they taking this class? What are their goals and interests? You can collect and refer to these cards to help you remember student names, and knowing more about students will help you tailor the class and make it more relevant to them. If you have a lot of students, these cards are useful to refer to throughout the semester, such as during office hours and other meetings and interactions with students in and outside of class.

» How much time and effort will the course require? What do students need to do in order to be successful?

» How will their work be graded? What are the policies on written work and deadlines?

ESTABLISHING AND MAINTAINING AUTHORITY

Establishing and maintaining authority is important, not just for yourself as a TF, but for students as well; they want to know that one person has control over the learning environment. Your authority is important to consider from the first day of class onwards.
What kind of TF do you want to be?

Your authority is important to consider from the first day of class onwards. What kind of TF do you want to be?

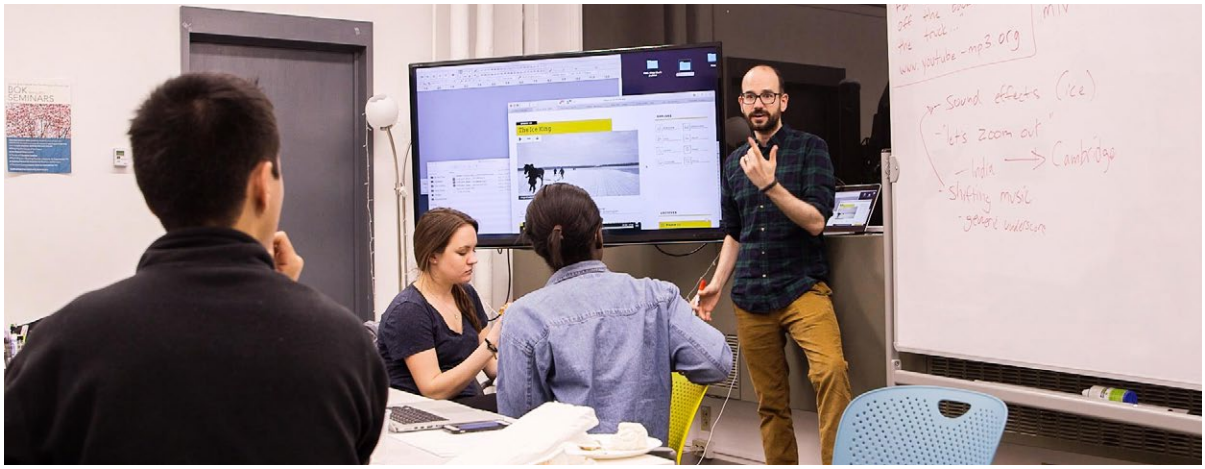
- **Consider what having authority means and looks like.** This may vary across cultures and personal preference. Think about what style works for you, how you want your students to address you, and how you want to present yourself to students. If you come from a culture where instructors are highly respected and never interrupted, you may be shocked to find that Harvard students generally expect to be able to ask questions at any time. Acknowledge these differences and prepare to be out of your comfort zone. Typically, the TF/student relationship is friendly, but still formal, so aim to strike a balance in this realm.
- **Be mindful of body language.** Practice introducing yourself or your course in the mirror, or better yet, to a friend or colleague who can provide feedback. Do you have the right balance between friendly and formal? It may help to pay attention to the body language of other instructors. Where are their hands? How do they use space? How often do they smile?
- **Manage anxiety.** Remind yourself how you got here. You are an emerging scholar in your field. Even if you do not feel like an expert on the subject you are teaching, you are qualified in that you are able to learn it quickly and to put it in the wider context of your discipline. (It may not seem like much, but even the fact that you are able to recognize that there is something you don't know—and to imagine what it would feel like if you did know it—means that you have something to teach your students!) You may be nervous at first, but remember the students may be even more nervous to be in a new situation learning new material, and it is your job to help them.
- **Be aware of your speaking style.** Do you speak quickly? If so, invite your students to ask you to slow down if they do not understand. Is English not your first language? If so, do not apologize! If you think it's necessary, be upfront about your language and invite students to ask you to repeat or slow down if they are getting used to your accent. Use the board to write any words that are difficult to pronounce clearly. In addition, be mindful of your level of expertise and how that may affect your language. You may need to adjust in order to be accessible to students of a range of educational backgrounds.
- **Share your educational credentials and relevant experience.** This will help students learn more about you, and it will also help you connect with students and establish your authority and credibility in a discipline.

- **Be prepared and organized.** Knowing what you will do and how you will do it will help your confidence and your ability to run a tight section. Plan how you will run the session including how much time should be allotted for each activity. Predict what kinds of questions students might ask so that you can better prepare.
- **Plan how to deal with questions you cannot answer.** No matter how much you prepare, you will not know all of the answers, and that's OK. Not knowing an answer on the spot does not necessarily undermine your credibility. Students will likely appreciate your openness and the atmosphere of learning that results when you are open to learning yourself. It also depends on what level answer is useful for the purpose of the course; a question may be outside the scope of the course material.

***TIP:* WHEN YOU DON'T KNOW AN ANSWER**

You might consider challenging the students to find the answer on their own before next class or you could promise that you will get back to your students with an answer. Both allow you time to research.

- **Know course policies and procedures.** This enables you to answer questions quickly and shows that you are in touch with the course head. Always have the syllabus accessible for reference.
- **Be explicit about expectations and hold students accountable.** State whether everyone needs to arrive by a certain time, and then follow through on that policy. Be clear that when students are late or interrupt in any other ways, they do a disservice to themselves and their classmates. Let students know what to expect when they miss class. State that you expect academic integrity and will report any offenses to the course head accordingly.
- **Address any inappropriate behavior.** If a student makes an inappropriate comment or engages in disrespectful behavior toward you or any other student, it is necessary for you to address it. This can be difficult to do. Focus on the behavior and not the person. Call it out and explain why it is an issue and state that you expect that it will not happen again. If you do not know what to do, you can simply say, "That is not ok," and then revisit the event in the next class. If an inappropriate moment has passed and you did nothing because you did not know what to do at the time, ask for support from the course head or other TFs to help you moving forward. Act as quickly as possible and do not be afraid to seek support.



PREPARING FOR AND DELIVERING A LESSON

Preparing for and delivering a lesson is a multifaceted process. Planning involves thinking about the goals for the lesson, considering how information will be presented, and deciding how students can engage with the content. Delivery involves the way you communicate the content and facilitate the session. That is a lot to think about and it is no surprise that planning for lessons can take a long time. Managing classroom dynamics is a skill that you will develop over time.

- **Establish clear lesson objectives.** What do you want students to get out of the lesson? What should they know or be able to do as a result of the lesson? How does it connect with the larger course objectives? These objectives should guide your lesson.
- **Create an agenda.** Doing so will help you organize your time. Sharing the agenda with students helps them know what to expect and what they should aim to get out of the session. It also helps focus the class.
- **Organize your section.** Each section should have a beginning, a middle, and an end. Have a clear introduction or agenda so everyone knows what is happening, then dive into the main part of the lesson. Use clear transition words to help students follow. Wrap up with a summary and conclusion.
- **Be intentional about presenting information.** You may do this with the board, slides, or handouts. Consider closely how students will be able to engage with your presentation materials.

TIPS: PRESENTING INFORMATION

BOARD WORK

- Print clearly and large enough for everyone to see.
- Refrain from erasing previous notes until you ask if everyone is finished.
- Use signposts, labels, or clear indications of new sections.
- When preparing for section, map out what you will write on the board; having a plan will make your board work more coherent.
- Make sure you face students enough while speaking. Be mindful about how long it's been since you've made eye contact. Or write at an angle so you can talk and face your students while jotting notes.
- If working out a problem, it can be valuable for students if you talk out loud about your thinking process.

SLIDES

- Use slides to display visuals or an outline of main ideas. Be careful with the amount of text you use.
- Try to avoid slides that encourage students to just copy notes without thinking.
- Keep things simple. Lots of colors, text, and busy images can easily distract from a lesson.

VIDEOS

- Provide students with a purpose for viewing the video (main point? emotional response? etc.), and then allow time to debrief after viewing.
- Keep videos short. Longer videos can be assigned for homework.

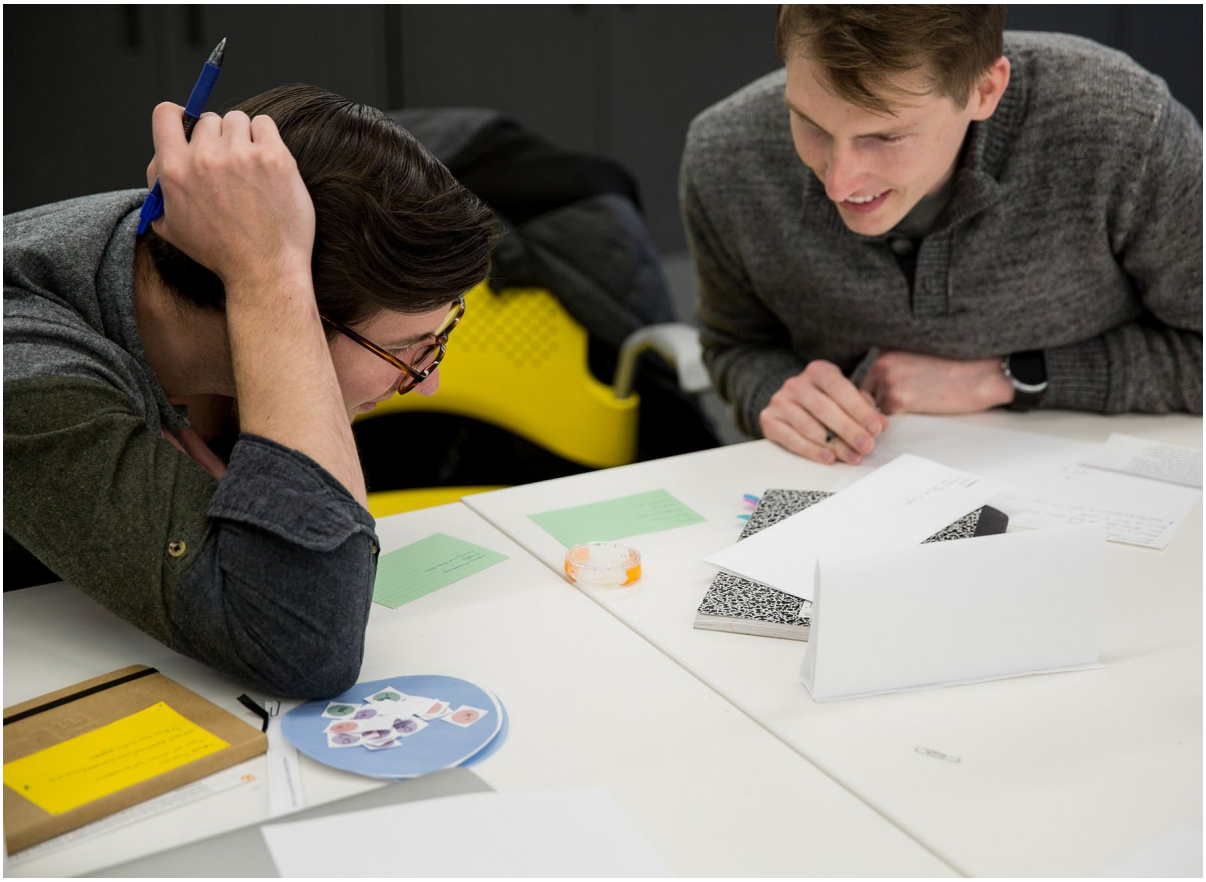
- **Use your space well.** Rather than stand behind a podium, move around. When students are working together in groups, walk around to check in and interact with them.
- **Infuse interactivity.** Throughout your section, include opportunities for students to engage with the material in a meaningful way. This can be quick, such as by asking students to answer questions, or by having students spend 5 minutes working in pairs on a problem or responding to a prompt *(see the next section on active learning for strategies on how to engage your students)*.

RESOURCES

BOOKS

Lang, J. (2010). *On Course: A Week-by-Week Guide to Your First Semester of College Teaching, 1st Edition.* Cambridge, MA: Harvard University Press.

Svinicki, M. & McKeachie, W. J. (2013). *McKeachie's Teaching Tips: Strategies, Research, and Theory for College and University Teachers, 14th Edition.* Belmont, CA: Wadsworth Publishing.



ACTIVE LEARNING

DEFINITION:
ACTIVE LEARNING

Active learning usually refers to in-class activities that engage students with course content in meaningful ways, allowing them to apply their knowledge and better gauge their own understanding, and allowing instructors to better assess learning.

Engaging students with the course material in meaningful ways is called active learning. When we first teach, many of us assume that the way to teach is to tell students what we know. We might do this by summarizing a chapter of history, explicating a poem, proving a theorem, or presenting a model of chemical interaction. We have many reasons for proceeding this way: as students, we've spent a lot of time listening to others tell us what they know, and teaching, at the very least, seems to mean transferring knowledge. Yet telling students what we know only partly defines the enterprise. For students to learn effectively, they must become more than consumers of our words; they must actively engage with the material.

To make the most of active learning, we need to allow our students to take over, putting them to work in ways that allow us to step back and observe them, to intervene when guidance is needed, and to offer feedback that reinforces and stimulates their efforts.

Take this example: In preparation for a field trip, a teaching fellow in geology invites her students to examine various rock samples and then draw pictures of these rocks on the chalkboard. She asks the students to make observations, to seek information by touch as well as sight, to find out what happens when they scratch the rocks with a knife, and to make inferences from their experiences. The teaching fellow is engaging her students in active learning. So, in a sense, is the history teacher who asks her students how they would lead the Russian Revolution to illustrate the Leninist "authoritarian state." Course material is just raw material; what students do with it is what results in their learning.

INCORPORATING ACTIVE LEARNING IN THE CLASSROOM

- If you're new to active learning, start with something small. Here are some examples of in-class active learning techniques that engage students and can be modified for various purposes. This list of activities ranges from easier to more involved:
    - *Think-pair share:* give students a moment to think individually in response to a prompt. For example, you can ask students to summarize the main ideas of a lecture, or try to solve a problem. Have students turn to a partner to share their thinking. Then debrief by asking one or two pairs to share their summaries or results.
    - *Gallery walk:* post pictures, graphical data, or excerpts of a text around the room. Have students walk around and interact with each text. Provide one or two guiding prompts. After each group has had a chance to engage with a significant amount of the material, debrief as a group.
    - *Jigsaw:* divide students into small groups. Assign each group a different problem, or a piece of content, etc. Once students have grappled with their problem or discussion topic, reassign groups so that each new group is made up of a member from each of the previous groups. Have them share their respective work with their new groups.

- **Allow students to engage in the material periodically (e.g., every 20 minutes).** Look at your section in chunks. Before moving on to another segment, consider providing an opportunity for students to make sure they understand the main points (e.g., turn to a partner and summarize the main points so far). Or, after introducing a concept, let students attempt applying it in groups (e.g., solve this problem and then compare your answers in small groups).
- **Facilitate time on task.** Pay attention to the groups. If one or two groups are finished, give the rest of the groups half a minute to wrap up. For large groups, turn off or flicker the lights to get everyone's attention back.
- **Debrief as a group.** You probably won't be able to address all students' work, but choosing one or two students to share their responses and responding to those alone is great feedback for everyone. Pick one or two students or groups to share their answers or summaries of their discussions. For problem solving, have a student or pair come up to the board to write out their answer. As a TF, students will look to you as the authority on what would be graded as a "perfect" answer on an exam when students report out their answers in section, so feel free to tweak a student's answer if it is close, but not quite perfectly correct.

***TIPS:* EXAMPLES OF ACTIVE LEARNING**

- Have students bring a short written summary of a reading assignment to the class in which they will discuss it.
- Take students into the field to encounter the operational realities of abstract ideas.
- Have students in a government section consolidate their understanding of a textbook chapter on Federalism by setting up their own federal system.
- In an astronomy class, have students grapple with the concept of relativity by pretending that Einstein is coming to visit and coming up with questions to ask him.
- In a psychology tutorial, set up a debate where each student or group of students takes the position of a different theorist.
- Ask students to wrestle briefly with a conceptual problem before giving a lecture that addresses it.

CLASSROOM DYNAMICS

Promoting positive classroom dynamics is important to do right from the start, as the atmosphere of your section will determine how motivating and productive it will be. Here are some tips for promoting positive classroom dynamics.

- **Set a positive climate by establishing ground rules.** Determine how students are expected to participate and communicate that. Have students generate their own list of ground rules and record these and share them with the group. Ground rules might include something like the following:
  - » Challenge ideas, not people.
  - » Take ownership of your contributions.
  - » Be mindful of your participation; if you are speaking the most, make sure you allow others to contribute.
  - » Be familiar with the readings in order be able to actively participate in an informed manner.
- **Facilitate discussions so that talkative students do not intimidate quieter ones.** One way to do this is to allow students to talk in pairs first. Regroup students into bigger and smaller groups periodically so that one or two dominant personalities do not take over.

- **Treat your students' questions (and especially their mistakes) with respect** and interest and give immediate and comprehensive feedback whenever possible. Wrong answers can be handled in a positive way, and often you can use them to extract an important point and clear up confusion.
- **Acknowledge students' contributions in the classroom.** You can express positive feedback by simply saying "good" or "thank you" in response to excellent points or perceptive questions. You can also summarize points students have made and credit individual students by name.
- **Check in to see how things are going.** One way to do this is to elicit anonymous feedback at the end of a class. Ask students to respond to the following prompts: "On a scale of 1-5, how comfortable are you participating in this class?" and "What is one thing that would make things better?" Be sure to let students know that you are asking for their feedback in order to help create and maintain a productive learning environment. Let them know that you will summarize your findings in the next class and share any decisions you make based on their feedback, such as what you will change and what you can't (and why not).

PROBLEM SET SECTIONS

As you begin teaching in a science or problem-set based course, clarify with your course head what topics will be covered and the depth of understanding required of the students. Professors sometimes approach material idiosyncratically, so it is important that you know first-hand how the course topics are being handled.

You will want to challenge students to think for themselves about the topics and issues raised by the course, but you need to manage time and limit discussions accordingly.

When teaching a section that is part of a large lecture course, you generally have about 50 minutes to review material that has been covered in three hours of lecture. You will want to challenge students to think for themselves about the topics and issues raised by the course, but you need to manage time and limit discussions accordingly.

STRATEGIES FOR PROBLEM SET SECTIONS

- **Focus on allowing students to tackle problems themselves.** In a section that is based on problem solving, the students should be engaged in solving problems themselves rather than just watching the TF solve problems on the board or listening to the TF re-teach lecture material. Briefly review the week's pertinent material to provide context for the problems, and then allow students to tackle them in pairs or in small groups. Whenever a group gets stuck on a particular problem, use it as a learning opportunity to discuss what skills or principles they should consider if they were to see a similar problem on an exam. This process can help make complicated concepts much more tangible to students.
- **Talk through the process.** After students solve a problem, ask them to describe their step-by-step process to the rest of the class. What does a problem provide? And what is it asking? How do we get from the givens of a question to the desired answer? This will help demystify the problem solving process and gives you the opportunity to codify thinking routines that are useful for students who are grappling with a particular type of problem.

- **Illustrate relevant problem-solving techniques.** Prepare examples that are similar to what they will need to employ on their homework and exams.
- **Tease out which types of problems your students seem to have the most difficulty with.** Prompt your students with problems that address the week's course material at multiple levels. Often they may be able to complete simple problems, but may not know how to solve more complicated problems that require the synthesis of multiple skill sets. Using problems to probe what they understand, and what they find challenging, you can focus on discussing the challenging concepts in section. You may also want ask students to email you questions or problems they find vexing before section.
- **Ask questions.** Check understanding to find out whether students are having difficulty with the material. For example, if a problem makes certain assumptions, ask how students might change their approach if the assumptions were changed. Encourage students to answer each other's questions.
- **Acknowledge students' questions.** Questions will range in quality and relevance. Acknowledge all questions with a brief response. For questions that are off-topic, too complicated or time-consuming to answer in the section, you might respond briefly and invite the student to pursue the topic further in office hours. You might explain that the topic is a good one but too complicated at the moment. If the question will be relevant at a later point in the course, say so and follow up on it at the appropriate time.

INTERACTIVE LABS

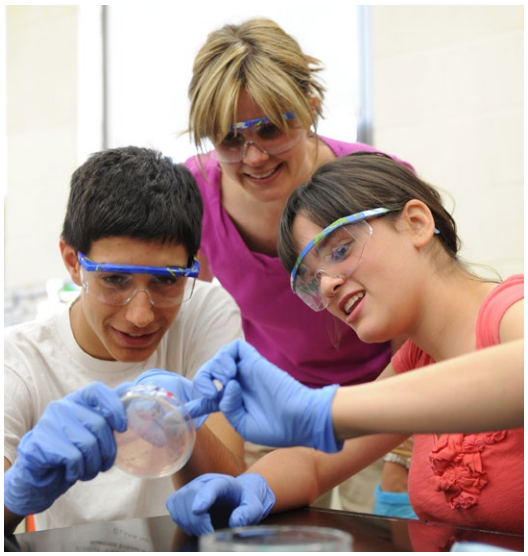
Interactive labs can be inspirational and meaningful learning experiences for students in that they allow them to engage directly with the process of scientific inquiry, discovery, and evaluation. Labs are also rewarding to teach, as they provide ample opportunity to engage with students, troubleshoot problems with them, and relate their experiments to your own research. The following strategies will help you make the most of the limited time for each section, run your lab smoothly, and maximize what your students learn. Most labs will be performed in pairs or in small teams of students.

STRATEGIES FOR INTERACTIVE LABS

- **Pre-test every lab yourself.** Do so using the equipment your students will be using, as there is no guarantee that experiments will proceed as described in the manual. Identify problems and tricky procedures that might ruin the experiments or waste time.
- **Get students thinking ahead.** Have your students prepare an outline or a flow chart of the lab's procedures before coming into lab. If there are any materials that may be hazardous in the lab, have them look up the appropriate procedures to handle them safely. Handing these in ensures that they have done basic preparation.
- **Clearly review and strictly enforce lab rules.** Encourage students to be alert and aware of themselves and their labmates. Remind them of relevant safety instructions and related safety equipment. Demonstrate procedures that require extra caution or involve special techniques.

***TIP:* TEACHING LAB EQUIPMENT**

The teaching labs often use equipment slightly different than those you are trained on in your lab, so becoming familiar with the teaching lab equipment ahead of time is crucial.



- **Plan ahead for emergencies.** Know the location and use of fire extinguishers, emergency eye-washes, and spill cleanup equipment. Insist that students use gloves, goggles, and lab coats to protect themselves from chemical splashes or burns. Know the hazards of chemicals they will be using and the required waste handling procedures.
- **Focus on the principles behind each experiment.** Be explicit with students about what they must learn from each lab, review the underlying significance of the lab exercise, and be prepared to answer their questions. Labs provide an opportunity for students to make solid connections between abstract principles and physical reality.
- **Ask strategic questions.** For example, "Which vessel contains the afferent blood and which the efferent?" or "Once you plot these points on your graph, how are you going to find the best straight line through them?" or "Why should you make measurements with the current going both ways through the coil?"
- **Highlight the importance of teamwork.** Team effort characterizes much of scientific work, so start teaching the ethics and responsibilities of teamwork to your students now. Encourage them to help each other, and arrange your labs so that they are working in groups. Think about the different roles team members can take on in an experiment.
- **Circulate among the students.** Be aware of what they are doing, as this is where some of the most interesting teaching takes place.
- **Get students to answer their own questions.** Rather than answer yourself, turn it around by acknowledging that the question is a good one, and guiding the student to the answer by breaking it down into steps that he or she can manage. Other students are often able to provide insightful answers to questions.
- **Begin and end your labs punctually.** Be strict about this, especially at the beginning of the term. There is a lot to accomplish in each lab section, and students also need to leave on time to meet their other commitments.
- **Provide insight along the way.** Indicate the techniques and procedures that are most likely to produce spurious data so that students can take extra care in those areas and not waste time with common mistakes. Similarly, remind them which techniques need not be executed with meticulous detail for a particular experiment.
- **Connect labs to the real world.** Relate the students' experiments to current research and ask students to think about how it relates to larger scientific questions.
- **Vary group structure—group work to whole group check ins.** Try to reconvene as a class once or twice during the lab to go over important ideas. (In some cases, you may only be able to do this at the end of lab.) Have students report you what they found. Does everyone understand the purpose of all the steps they completed? If their results are different from what you expected, encourage them to reflect on the plausibility of their findings. What might the sources of error be? Get them to generalize from their data to see the concept or principle underlying the lab.
- **Ensure access.** Be sure students have equal access (and sightlines) to lab equipment and experiments.

DISCUSSION SECTIONS

At their best, discussions make every student feel like a vital part of the intellectual fabric of the class. They are a means for students to learn and practice skills, generate ideas, solve problems, consolidate knowledge, criticize arguments, develop insight, and gain confidence in handling new concepts. Good discussions also allow students to formulate the principles of the subject in their own words. Ideally discussions provide a structured setting for students—and the instructor—to work through the core concepts or problems raised by readings and lectures. Sometimes the process allows students to converge toward a consensus (e.g., where there *is* something like an answer or solution); at other times the process allows for ideas to diverge (e.g., where the goal of the discussion is to highlight a range of approaches to a concept or the genuine messiness of a thinker's ideas).

Leading discussion sections effectively requires a lot more listening than speaking, and the speaking done by the instructor comes, in large part, through questions.

Running an effective discussion section is never as straightforward as asking a series of questions, and any given section is liable to raise questions in the face of everyday obstacles, e.g., How does one interrupt politely? Praise a valuable contribution? Ensure that various points of view are heard? Energize a low-energy room? Encourage reticent students? Regain the discussion from domination by a few? Solutions to these common problems can—and has—filled entire bookshelves *(see "Resources" at the end of this section for more advice on leading discussions)*.

Leading discussion sections effectively requires a lot more listening than speaking, and the speaking done by the instructor comes, in large part, through questions. There are many types of questions you can use to guide discussion, and the following is a taxonomy of common types.

TYPES OF DISCUSSION QUESTIONS

Setting the context and gauging the room

- **Check in.** (Where's everyone's energy level at today? Is anyone taking midterms this week?)
- **Take stock of the course.** (What are our upcoming deadlines? Does anyone have any questions about course-related business?)
- **Pivot from the last meeting.** (How does today's topic or theme build on what we discussed in our last section?)
- **Set goals for the discussion.** This may or may not come in the form of questions. If you have concrete goals in mind, go ahead and let your students know—making them "guess what's in your head" at this point in the discussion might not be a good use of time or energy.

Laying a foundation

- **Find out where students are.** (Which of the study questions did you find most provocative or most difficult to answer?)
- **Ask for summary.** (What two or three key lessons have we learned about how cognitive biases affect human judgment?)
- **Gather information.** (What was the gross national product of France last year? In what year was photography invented?)
- **Encourage personal responses.** (What are your reactions to the story? What aspects of this case were most interesting to you?)
- **Prompt students to analyze.** (What is your analysis of the problem? What conclusions did you draw from this data?)

Building toward analysis and evaluation

- **Challenge and test.** (Why do you believe that? What arguments might there be to counter that view?)
- **Interrogate priority and sequence.** (Which of the two things you've mentioned is more relevant to Faulkner's narrative form? Given the state's limited resources, what is the first step to be taken?)
- **Ask for predictions.** (What will be the result of a heavy increase in lobbying against this proposed legislation?)
- **Hypothesize.** (What might have happened if Elizabeth I had remained in power for ten more years? In what ways would this play be different if it was set in the American South?)

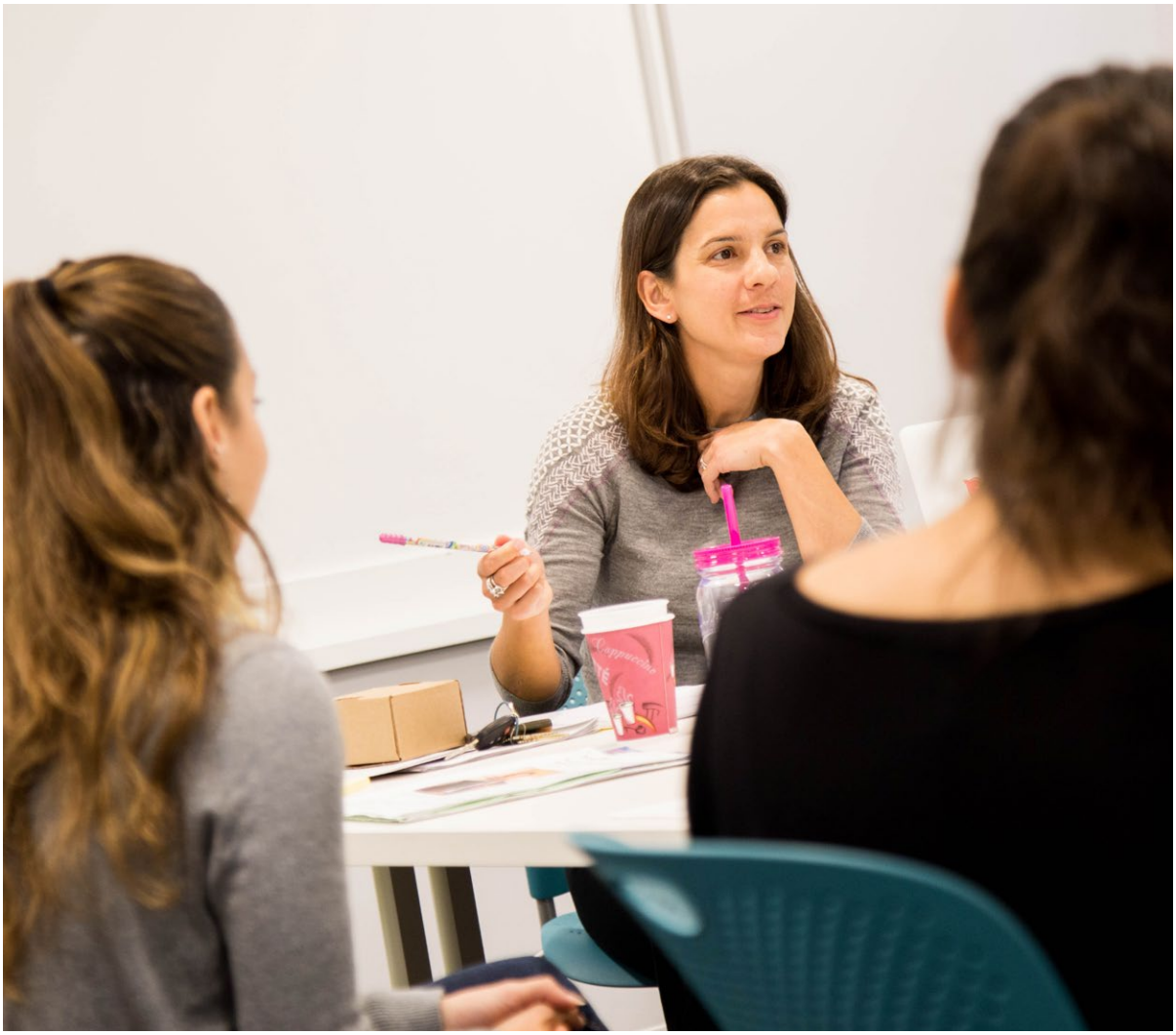
Promoting application and self-reflection

- **Elicit action.** (What would you do in order to implement the government's plan?)
- **Extrapolate.** (What implications might this observation about early childhood development have for how we see adolescents?)
- **Interrelate.** (How might your observations relate to what Jane said about Hindu belief structures?)
- **Generalize.** (Based on your study of the computer and telecommunications industries, what do you consider to be the major forces that enhance technological innovation?)
- **Connect on a personal level.** (How does our complication of Singer's proposal impact your own calculus of altruistic behavior?)

STRATEGIES FOR LEADING DISCUSSION SECTIONS

PLANNING DISCUSSIONS

- **Consider background knowledge.** First, think about the material in light of your students' knowledge and experiences. The sorts of questions you start with should meet students where they are.
- **Plan your questions.** Think of lines of questioning that will—whether they arrive at answers or just more questions—get students thinking their way from where they are toward the concrete objectives of the section (e.g., helping them process or apply a new concept, preparing them for an upcoming assignment, or introducing a set of unresolved questions that will take up the next few weeks of the course).
- **Share concrete objectives.** Whether you lay out the objectives in an email before section or write them on the board at the start of class, it's important that students have a clear sense of what the goals of the section are, and why.



ARRIVING AT CLOSURE

- **Leave time** to recognize what students have accomplished during section. Make sure to leave a few minutes at the end of class for debriefing and looking ahead.
- **Gather a summary** of the important points raised during discussion, write them on the board (if you haven't already) and walk through them with students to lend a narrative to the discussion you had.
- **Tie the outcomes of discussion to goals** you set beforehand (Which ones did you meet? What's the gameplan for the ones you didn't meet? Did you meet goals you hadn't imagined at the outset?)
- **Look ahead** to upcoming homework, course themes, or major deadlines. This sort of framing can remind students that the progress made in any given section is in fact progress toward more general goals and milestones within a course.
- **Invite students** to reach out if they have unresolved questions or concerns based on the discussion. If the discussion has gone well, they should!

GETTING STUDENTS INVOLVED AND KEEPING THE DISCUSSION ON TRACK

- **Clearly identify discussion questions in advance.** Hand out or email to students two or three discussion questions before class so they can prepare. Allow each student to become the "expert" on some aspect of the discussion.
- **Ask students to prepare for discussion** by writing a short paragraph or responding to prompts. Look at the responses ahead of time so you can plan the discussion based on student input. You can do this by having students email their comments to you or by having them post to the course website ahead of time.
- **Develop a joint agenda.** Tell students that you will ask them to suggest topics for discussion before each class (you may want to begin the list with a few topics of your own). Have the group pick the ones they want to discuss or the ones they found most provocative or difficult.
- **Ask students to take a position** on a text or an argument. Students can also pair up or divide into small groups to present different sides in a debate.
- **Encourage study groups.** Explain the virtues of collaborative work and exchanges of information. In many courses, it is appropriate for students to study together, even as they pursue independent efforts.
- **Call on students by name** and encourage them to do them to do the same. They will be gratified to hear that you *think* their ideas are important and that you're creating a more personal discussion environment.

***TIP:* RESPONDING TO SILENCE**

Take up to 15 seconds or so to allow students to consider a question. This may seem long, but the silence will both encourage students to process your question more fully and—without you to bail them out—eventually jump in.

- **Take notes** on what students say (maybe listing the most important points on the board) and use them to refer back to their contributions.
- **Don't fill every silence.** Leave sufficient time for students to consider a question before repeating it, rephrasing it, or adding further information.

- **Don't bail yourself out** by always calling on the most eager students. Rather, look for students who are obviously thinking, i.e., who might want to speak but seem hesitant, and invite them to weigh in.
- **Rephrase students' questions** and partial answers and direct them back to the students. This can keep students talking to each other and help maintain the momentum of a discussion that is turning into a question-and-answer session with the teacher.
- **Stimulate discussion** with relevant outside examples or material objects, such as poll results, historical documents, pictures, anthropological artifacts, etc.
- **Divide a large section into smaller groups** that will focus on a specific question or topic from a list. You can then visit each group. Leave some time for the class to reassemble so that the groups can report to each other and you can tie up loose ends.

RESOURCES

BOOKS ON LEARNING AND TEACHING

Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). *How Learning Works: Seven Research-based Principles for Smart Teaching.* Chicago, IL: John Wiley & Sons.

Brookfield, S. D., & Preskill, S. (2012). *Discussion As a Way of Teaching: Tools and Techniques for Democratic Classrooms.* Chicago, IL: John Wiley & Sons.

Brookfield, S. D., & Preskill, S. (2016). *The Discussion Book: 50 Great Ways to Get People Talking.* San Francisco, CA: Jossey-Bass.

Brown, P. C., Roediger, H. L., & McDaniel, M. A. (2014). *Make It Stick: The Science of Successful Learning, 1st Edition.* Cambridge, MA: Harvard University Press.

Lang, J. (2010). *On Course: A Week-by-Week Guide to Your First Semester of College Teaching, 1st Edition.* Cambridge, MA: Harvard University Press.

Lang, J. (2016). *Small Teaching: Everyday Lessons from the Science of Learning.* San Francisco, CA: Jossey-Bass.

Svinicki, M. & McKeachie, W. J. (2013). *McKeachie's Teaching Tips: Strategies, Research, and Theory for College and University Teachers, 14th Edition.* Belmont, CA: Wadsworth Publishing.

BOK CENTER RESOURCES

Bok Seminars: Bok seminars can help you prepare for teaching (e.g., *Hit the Ground Running: A Seminar for New TFs* and *Classroom Communication Skills for International TFs*) and they offer a variety of opportunities to focus on a teaching aspect you would like to improve or explore (e.g., *Teaching as Storytelling* and *Designing a Syllabus*). Seminars are targeted toward disciplines (e.g., *Active Learning in the Sciences*), or classroom activities (e.g., *The Art of Discussion Leading* and *Effective Ways to Improve Student Writing*), and learning sciences (e.g., *Make It Stick: Applying the Science of Learning to Your Teaching*). Visit the Bok Center website to learn which seminars are being offered each semester to find one that works for you.

OFFICE HOURS

Students come to office hours for a wide variety of reasons.

Some may come for course specific reasons, such as to ask questions about course content, to request help with homework and assignments, or to address concerns about grades. Others may come to get to know you better, to learn more about your discipline, to talk with you about the possibility of pursuing a graduate degree (and other career-related decisions), or to request a letter of recommendation. When students visit you during office hours, it gives you both the opportunity to get to know each other better. You can get a sense of how things are going in the course. Additionally, you can determine if a student is struggling and identify ways to help before it's too late. So, why don't some students attend? Some students might feel intimidated; others do not see the value; others may not actually want more personal attention. Still others may not be able to make the scheduled times due to other priorities or commitments.

Here are some strategies on how to make the most out of office hour meetings, including how to get students to come and what to do when they get there.

STRATEGIES FOR OFFICE HOURS

- **Choose office hours that work for your students.** Once you establish a time, check to make sure they work with most students. If not, consider rescheduling. If only some can't make it, invite them to schedule appointments outside of office hours and explain clearly how they can do that.
- **Explain what to expect.** Let students know what they can get out of office hours and what they can expect will happen when they visit. Some students may not attend because they do not understand the value.

- **Advertise office hours.** Make sure they are on the syllabus and on the Canvas site. Remind students in class about your availability and express that you hope they will come see you.
- **Make an initial appointment mandatory.** Break the ice by requiring each student to come in during the first month of the semester, even if only to introduce themselves.
- **Encourage attendance.** Keep in mind that attending office hours may be intimidating for some students or unfamiliar depending on their previous educational experiences. Create opportunities or incentives that will encourage them to attend; and when they do come, help them feel at home. It will be easier for them to open up if you warm the environment with some small talk. Ask them how their semester is going and use the opportunity to get to know them a bit.
- **Learn about why students come.** If students don't initiate it themselves, ask them what brings them in. It's a great way to transition from small talk to getting down to business.
- **Provide constructive feedback.** One way to know how to do this is to simply ask students what kind of feedback they want. Do they need encouragement? Are they looking for a strong critique? Whatever they want and need, be as specific and concrete as possible in your feedback. Ask them to repeat what they understood of your feedback to ensure the message was clear.
- **Provide concrete suggestions for what they can do to succeed.** If students are struggling, ask them how they are approaching the course. From there you can give them feedback on what they are doing correctly and what they can change to be more successful.
- **Focus on what can be done.** Be aware of your limitations as a TF. For example, you may not be permitted to change a grade or adjust an assignment. Be wary of telling students that everything will be ok even if they seem really upset because in reality, you do not know that for sure. If a student is overwhelmed, upset, or dissatisfied about their performance, acknowledge their emotional response ("It's understandable to be so concerned about your results") but focus on what their options are moving forward ("It looks like you can improve in these areas. Come to office hours next week for a tutorial on this"). Help them identify strategies for improving their situation. It can help to break things down into smaller tasks rather than look at everything that needs to be done all at once.
- **Be aware of student support services.** Be ready to guide students to resources they may need for study skills development or other support. Know the process for dealing with mental health concerns. Connect with your teaching support network about the best way to support students.

***TIP:* GUIDE STUDENTS TO AN ANSWER**

If working on an assignment, writing or otherwise, students may not be sure what their questions are. You can guide them by asking them to explain how they got where they are in the process. From there you can probably figure out where things went wrong. Rather than simply providing an answer or correcting them, consider scaffolding questions to guide students to where they need to be. Show them what they are doing right, point out where things went wrong and ask them for ideas on how they might do things differently before providing your advice. They may already know the answers themselves.

GRADING AND ASSESSING STUDENTS

Even though TFs do not always have control over what course assessments will be, they can often play a significant role in shaping and explaining them.

It is important to consider several questions when designing or discussing tasks for your students: What is the purpose of the assignment in relation to the overall goals of the course? What knowledge and skills do you want this assignment to develop or assess? What types of secondary sources should be used, if any? What logistical requirements (length, format, when and where to turn in the assignment, etc.) do you want students to follow? Will there be opportunities for drafts and revisions? How will assignments be evaluated? What is the course policy on extensions and late submissions?

HOW TO KNOW IF STUDENTS ARE LEARNING

Most people, when they wonder whether students have learned, look to the results of graded assessments like midterms, exams, or final projects. We can also keep track of student learning in a lower stakes, less formal, and ongoing manner, like by providing feedback on a draft of a paper, or asking students to work out a problem together in class and giving feedback on their process. The advantage of ongoing, low-stakes assessments is that they can help students build the skills, knowledge and self-awareness required to be successful in the more formal and higher-

As a TF, you have the opportunity and responsibility to gauge and provide feedback on student learning.

stakes graded assessments. As a TF, you have the opportunity and responsibility to gauge and provide feedback on student learning. Considering best practices with both high-stakes assessments and lower-stakes ongoing assessments will better support student learning.

STRATEGIES FOR HIGH-STAKES GRADED ASSESSMENTS

- **Collaborate with course head and other TFs.** TFs and the professors should work together so that all TFs apply course standards fairly.
- **Have clear assignment descriptions.** For assignments, make sure there is a clear description and that you can address any clarifying questions about the assignment. Descriptions include what the assignment is assessing, how it relates to the overall goals of the course, what the students are expected to do, by when, and how they will be evaluated.
- **Communicate grade policies.** These should exist on a syllabus, and as the TF, you should be able to communicate and clarify any questions regarding the grading policies, including late penalties, extensions, academic integrity, etc.
- **Ensure fairness and consistency.** Using rubrics can save time and help ensure fairness across assignments. If you work with a team of TFs, create the rubric together. This rubric can be used to explain grading in a more objective manner if students have questions about their results. Consider also, calibrating a few assignments with other TFs to make sure all students are being evaluated in a similar manner. Often in math and science, TFs do not grade their own students; instead, each TF will grade one or two questions on all the exams. In the humanities and social sciences, TFs may similarly share the grading of exam questions, but applying course wide standards fairly involves more individual judgment in these areas. Explaining the grading processes and procedures to students can help mitigate any conceptions of unfairness.
- **Consider blind grading.** Another way to ensure fairness is to grade blindly, which means hiding students' names from view when evaluating. We are all human, and therefore are vulnerable to bias. We may expect students who had previously done poorly to continue to do so, or we may have some other underlying implicit biases affecting our approach to student grades.
- **Give constructive feedback.** What did the student do well, and what do they need to improve? Feedback on assessments should help students understand what they have achieved with their learning, what they need to improve, and specific strategies for how they can do so.
- **Keep student work and grades confidential.** TFs should not post grades by student name or identification number; nor should they share information about a student's progress with their family members (even a well-meaning parent). To do so would constitute a violation of FERPA, the Family Educational Rights and Privacy Act.
- **Keep the course head in the loop.** If a student isn't doing well, or you are concerned about how to handle unsatisfactory grades, do not hesitate to talk to the course head. The course head may advise you to reach out to one of the student's residential advisers (either a Freshman Dean, if your student is a first-year, or an Allston Burr Assistant Dean, if your student lives in an upperclass house). These individuals are meant to be the primary contact for teaching staff concerned about students' overall performance at the College.

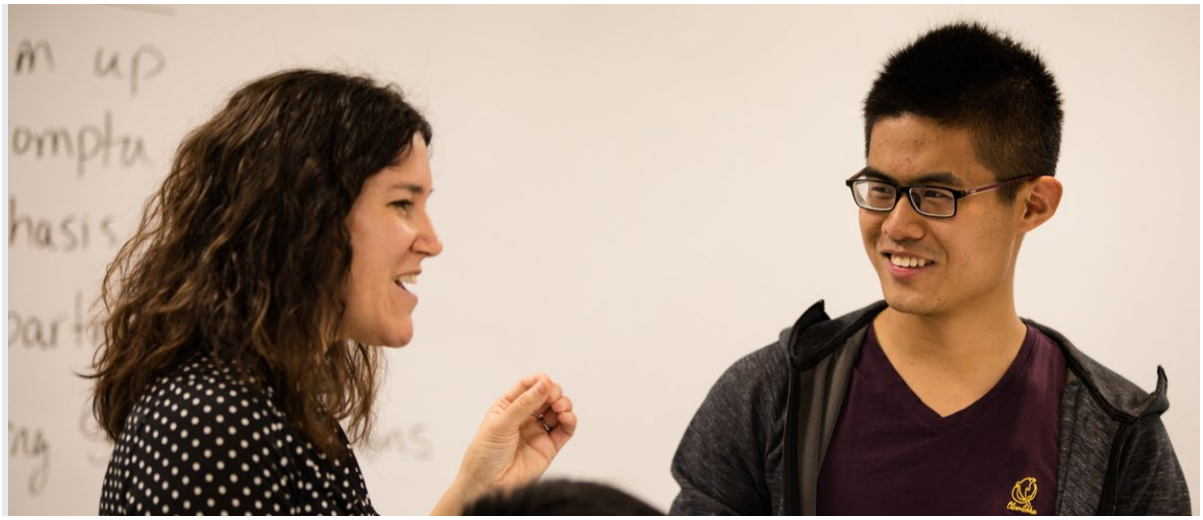
STRATEGIES FOR ONGOING LOW-STAKES ASSESSMENTS

- **Provide opportunities to demonstrate learning.** In line with active learning techniques, provide students opportunities in class to demonstrate their learning in ways that are similar to higher-stakes assessments. This way you can get a general sense of how students are doing and all students can reflect on their own performance compared to the examples drawn out in class.
- **Scaffold assignments.** Require students to submit a proposal on an assignment, complete a draft of a paper or project iteration earlier in the semester and have them bring it to office hours for feedback. For presentations, allow students to work in groups to do a rehearsal for peer feedback before a final presentation is due.

TIPS: OPPORTUNITIES TO DEMONSTRATE LEARNING

- Have students:
  - » work through a problem in pairs
  - » brainstorm an outline for their next term paper, or
  - » summarize the main points of a lecture.
- Pick two or three groups to share their work with the class and give them feedback on the spot.

- **Try a minute paper.** At the end of a session, module, or section of a course, ask students to anonymously respond to a prompt for one minute. These prompts can be something like: What was the main point of today's session? What is the most striking/disturbing/surprising aspect of today's session? What is one question that remains? Collect these responses for a quick skim to get a sense of where everyone is. You cannot address every response, so in the next meeting, summarize main themes and give some indication to students of where they should be. For example, you could respond by saying, "If you answered something like this <example response>, then you want to focus on 'x'. If you answered something like this <example response>, you are on track."
- **Use the muddiest point activity.** Similarly, at the end of a session, module, or section of a course, ask students to anonymously write one thing they are still unclear about. Collect the responses and sort through them to get a sense of any patterns of confusion. Summarize your findings in the next class and offer suggestions for helping students work through confusing points. You may even be able to dedicate a part of a section for review.



COMMON CHALLENGES AROUND GRADING AND ASSESSMENT

HANDLING COMPLAINTS ABOUT GRADES

Some students will argue insistently about one point here or there on course homework. TFs must be prepared to explain that all TFs are grading according to an agreed upon policy. Making sure grading criteria are clear for each assignment can help avoid complaints, and if students do come to complain you have clear guidelines to refer to. Try to use the complaint as a moment to check in on how the student is doing, how they approach studying, and where they can improve. Focusing on what they can do better next time can keep the conversation grounded. Since TFs do not have the final authority on giving grades, any larger-scale complaints ultimately go to the course head. One experienced TF recommends answering a student's complaint simply by saying, "I'll ask the professor to read your paper/review your exam again."

EXTENSIONS AND EXCUSES FOR EXAMS

All TFs should familiarize themselves with the policies around extensions and excuses for exams. Course heads can and should provide arrangements to students with medical or other personal problems; Allston Burr Assistant Deans and Assistant Deans of Freshmen are always available for consultation on how such arrangements can be equitably offered. Any request for accommodations should be vetted through the Accessible Education Office (AEO) at aeo.fas.harvard.edu. Administration of, and substitution for, final examinations is under the control of the Registrar and the Administrative Board (the "Ad Board") at adboard.fas.harvard.edu.

CONFRONTING PLAGIARISM OR CHEATING

All TFs should familiarize themselves with the Harvard College Honor Code. Any suspected cases of cheating or plagiarism should be discussed with the course head or faculty member immediately. Learn more at honor.fas.harvard.edu/what-faculty-and-instructional-support-staff-need-know.

RESOURCES

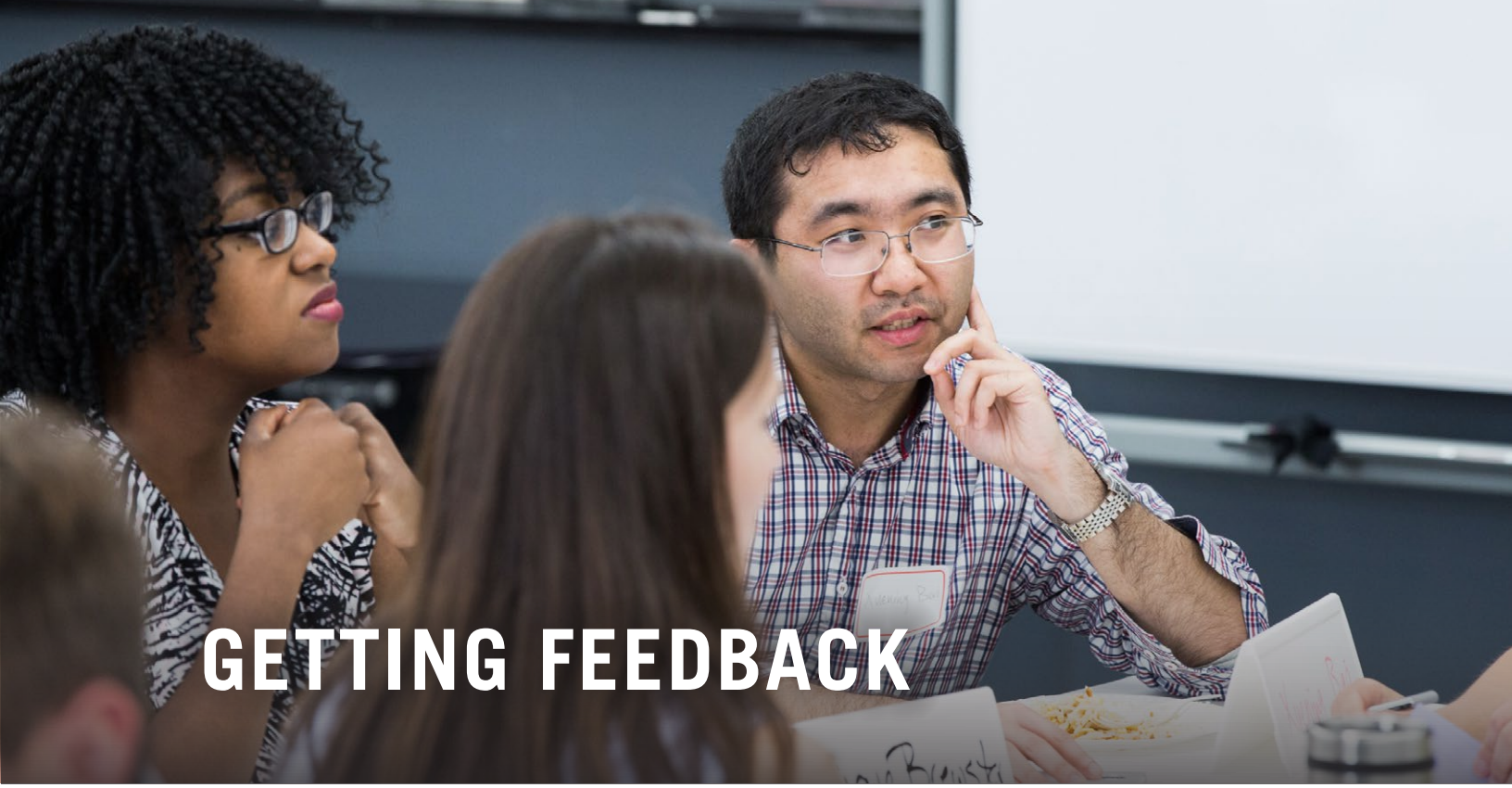
BOOKS

Angelo, T. A., & Cross, K. P. (1993). *Classroom Assessment Techniques: A Handbook for Faculty, 2nd Edition*. San Francisco, CA: Jossey-Bass.

Walvoord, B. E. (2010). *Assessment Clear and Simple: A Practical Guide for Institutions, Departments and General Education*. San Francisco, CA: Jossey-Bass.

BOK CENTER RESOURCES

Bok Seminars: Bok seminars offer a variety of opportunities to focus, at least in part, on assessment, such as *Effective Ways to Improve Student Writing* and *What Are My Students Actually Learning?* Visit the Bok Center website to learn which seminars are being offered each semester to find one that works for you.



GETTING FEEDBACK

How do you know how you're doing as a teacher? Just as in student learning, we can evaluate teaching through both formal and informal methods.

Higher-stakes assessment of teaching at Harvard includes end-of-course evaluations, or The Q, that provide feedback on how your course went. Lower-stakes assessment of teaching can be implemented in an informal and ongoing basis and can allow you to make changes to your teaching in the current semester.

COURSE EVALUATIONS AND THE Q

At Harvard, the Committee on Undergraduate Education, in partnership with the Office for Faculty Affairs, conducts a major course evaluation program at the end of every semester in which students provide feedback on their courses. The results are summarized online in the Q Guide at fas.harvard.edu/~evals. Sections are evaluated as well as lectures, labs and tutorials. Section leaders can access copies of their own students' evaluations online at webapps.fas.harvard.edu/course_evaluation_reports.

STRATEGIES FOR MAKING THE MOST OF THE Q-EVALUATIONS TO IMPROVE YOUR TEACHING

- **Encourage students to provide feedback.** End-of-term feedback will be most meaningful and constructive if you have taken earlier steps to communicate to your students that you welcome their feedback. Let them know that you value their feedback and communicate what kind of feedback would be useful (e.g., specific examples of things they liked or disliked and concrete suggestions of how to improve).

- **Preview evaluations online.** Reading the Q Guide is also one way to stay informed about the student perspective, generally. Seeing what students appreciate (and complain about) in a variety of courses will suggest what to pay attention to in your own teaching and guide you toward more useful feedback. Look through a variety of course feedback for themes.
- **Share your results.** If you want to have a different perspective or deeper understanding of your feedback, consider consulting with Bok Center staff, or even sharing your results with a peer. An outside perspective can help you make sense of the information and figure out what you can do to improve moving forward.

ONGOING AND INFORMAL ASSESSMENT OF TEACHING

Examples of this kind of assessment include regular checks on what and how students are learning, early feedback techniques, and peer observations, which can provide low-stakes feedback on teaching and on how the course is going. A good way to regularly check on student learning is to implement classroom assessment techniques. Doing so will likely improve the final course evaluations because based on the feedback, teachers can actually make changes to the current course, resulting in better learning experiences.

***DEFINITION:* CLASSROOM ASSESSMENT TECHNIQUES**

Classroom assessment techniques are simple, low-stakes activities that give both students and teachers useful feedback on the teaching-learning process. They allow instructors to make informed decisions about teaching, and may provide students with a stronger sense of how they are doing.

- **Collect early feedback.** When you're about one third into the course, ask students to take a few minutes to respond anonymously to the following: What is going well for you in this course? What is one thing that could be improved? What suggestions do you have? Visit the Bok Center's website to learn more about the process of collecting early feedback.
- **Assess your class.** Here is an example of a classroom assessment technique called a minute paper. End the class five minutes early on occasion and ask your students to anonymously write the answers to a few questions about the class. Be sure to let them know that you are checking in on how things are going and will summarize your findings in the next class meeting.
    - » To get feedback on specific content, you can ask the following:

      What were the main points of today's class?
      What points were confusing or unclear?
      What might help to clear up the confusion?

    - » To get feedback on your teaching in this way, you might ask the following:

      What do you like most about section meetings in this course?
      What do you like least about section meetings in this course?
      What suggestions do you have for me as your teaching fellow?
- **Respond to feedback.** Once you have collected your students' feedback, respond to it promptly. Discuss the feedback with your students and let them know that you are acting on it. Some TFs compile a summary of students' responses and distribute it to the class; students then have a

sense of what their peers think and can see that you take their feedback seriously. If students have reported that they are often confused, for example, you can encourage them to ask questions more often and even tell them effective ways to ask for your help. You may also attempt to be more clear in your presentation and you can let students know what you are doing to make this happen. Discussing their feedback with them demonstrates that you want to improve the class and that you welcome their participation in doing so.

- **Consider peer observations.** TFs often find it helpful to visit and observe other classes, including sections led by other TFs in the same course or courses in their department that they know are taught well. Discussing observations with these teachers after the class meeting can be an important way to reflect on teaching techniques. You could also ask others to observe classes you teach and to offer suggestions. Consider sharing your lesson plans, your class activities, and your methods of presenting information with a peer.
- **Get feedback on your approaches.** In addition to inviting peers to observe, we also encourage teachers to record a class and then view the video. It is an excellent way to put yourself in the shoes of your students. You could also view the video with a trained Bok Center consultant. Experienced Bok Center staff may also be available to visit your class and consult with you afterwards, confidentially, in order for you to gain insight into how your teaching is perceived by an objective observer.
- **Reflect on your teaching.** At the end of each session, consider taking 10 minutes to quickly reflect on what went well and what could be improved. These reflections can help you plan your next class or reflect on your teaching more generally.

RESOURCES

BOOKS

Angelo, T. A., & Cross, K. P. (1993). *Classroom Assessment Techniques: A Handbook for Faculty, 2nd Edition*. San Francisco, CA: Jossey-Bass.

Brookfield, S. D. (2017). *Becoming a Critically Reflective Teacher*. Chicago, IL: John Wiley & Sons.

BOK CENTER RESOURCES

Classroom observations and consultations. The Bok Center offers classroom observation and consultation services. As a TF at Harvard, you can invite Bok staff to attend your section, or have it video recorded. You can then schedule a consultation to review top takeaways. Contact the Bok Center to set up a consultation.

Teaching portfolio development. A number of Bok seminars have been dedicated to reflections on teaching, such as *How Am I Doing? Using Feedback to Improve Your Teaching* and *Writing A Statement of Teaching Philosophy*. Visit the Bok Center's website to learn which seminars are being offered each semester to find one that works for you. In addition, Bok staff are available for individual consultants that focus on teaching portfolio development. Contact the Bok Center to set up a consultation.

NEXT STEPS: PROFESSIONAL AND SCHOLARLY DEVELOPMENT

We improve our teaching over time as we gain more experience and reflect on our practice. It's never too early to start thinking about your professional development as a teacher, and how the skills you develop through teaching can help you in other areas of your career. What are your strengths? What areas do you want to improve? Improving your practice allows you to be more successful, enables your students to learn more effectively, and helps you develop your own professional skills.

Whether you are designing a syllabus, thinking about how to explain a key concept from your research, or preparing a formal research presentation, we encourage you to consider how the work you do in your teaching is connected to your scholarship. The Bok Center has a variety of programming designed to help you tailor your professional development plan for the stages of your academic career on a range of topics including getting started with teaching, exploring hot topics in teaching and learning, improving public speaking and communication skills, and developing a teaching portfolio for academic job applications.

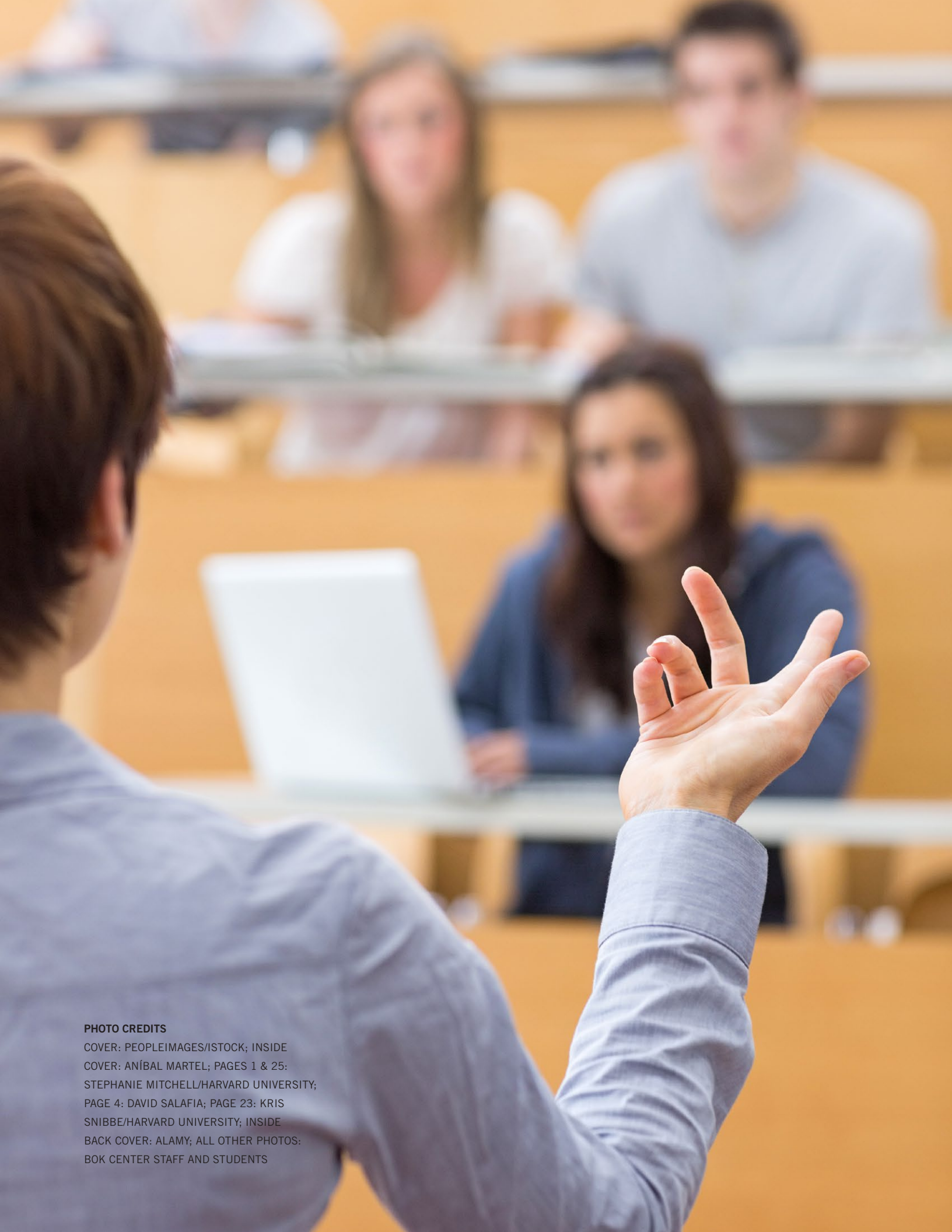
RESOURCES

BOK CENTER RESOURCES

Bok Seminars. Each Bok Seminar offers graduate students and scholars the opportunity to explore an area of interest in teaching and learning over multiple sessions. Seminars vary in length and intensity based on their focus areas and goals. They range from 6 sessions to full semester offerings. Seminars are offered in the focus areas represented in the Bok Center Teaching Certificate. Visit the Bok Center website to learn more about our seminars.

Bok Teaching Certificate. The Teaching Certificate offers graduate students and teaching fellows a tangible marker of their ongoing development as teachers in higher education. The Certificate is structured to give participants the opportunity to critically reflect upon their performance as teachers and to actively experiment with various modes of communication in lectures, seminars, labs, and across the academic profession. Visit the Bok website to learn more about our teaching certificate.

Additional Bok Services. We offer TFs individual consultations, fall and winter teaching conferences at the beginning of each semester, and workshops on a variety of topics, including teaching portfolio development. We also have opportunities for experienced TFs to get involved. We look forward to working with you!



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