Put the Pencil Down

Essentials of Tutoring

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How to Use This Book

Tutoring is a complex set of skills and behaviors that can best be taught by

- Demonstrating effective techniques,
- Practicing in real-world tutoring situations, and
- Providing opportunities for reflection and discussion.

This book was designed to introduce new tutors to a wide variety of important skills. The information and exercises in Chapter 1 help potential tutors decide whether tutoring is right for them. Chapters 2 through 4 give overviews of fundamental principles that affect tutoring. Chapters 5 through 9 focus on specific techniques, and Chapter 10 asks readers to reflect on what they have learned.

Each chapter begins with a tutor’s voice about his or her experience. Throughout the chapters, exercises ask readers to reflect and use what they have learned. Conversations based on the book’s exercises and tutor’s observations are crucial to developing the skills necessary to be an effective tutor.

This text was developed based on a semester-long tutor training course taught at NC State University; however, it is flexible enough to be used for various types of training programs. Chapters can be read in almost any order to suit your training schedule. If you have the opportunity to provide extensive training before tutors begin working with students, consider incorporating shadowing into the training so that tutors can reflect on the prompts in the text. If a formal tutor training course is not a viable option, frequent workshops should be held during the semester with the Boot Camp model.

The Boot Camp model:
- During recruitment and hiring: Chapter 1
- Boot Camp (before tutoring begins):
  - Appropriate elements of Chapter 2
  - Chapters 4–6
- Continued trainings/online discussions/staff meetings (throughout semester)
Revisiting and reflecting on Chapters 4–6
Chapters 3 and 7–10

Regardless of the training structure, tutors should always be given the opportunity to learn skills through book work, practice the techniques in actual tutoring sessions, and reflect and plan for future situations.
Preface

My first experience with tutoring was when I was about seven years old and my mother began tutoring a neighborhood boy in geometry. If I wasn’t being so loud that I was asked to play outside, I often played with my toys in the family room while my mother and her student worked at the kitchen table. I remember being struck even then at how silent the kitchen became.

At my elementary school, math class consisted of two choices: either Mrs. Waters writing on the blackboard and explaining a new concept or students raising their hands high to answer her questions. In the classroom there was always something very clearly going on; there was never silence. At the kitchen table those afternoons, there was plenty of talk, but there was often just silence. Sometimes I would see the student working on a problem, and sometimes he would just stare. My mother, in her calm manner, would let him think until he started either working on the problem, made a statement, or asked a question. I realized then that learning did not always have to go at the teacher’s pace. I see now that my mother allowed her student the space and time to work, think, develop connections, and formulate his questions (not hers). That is the wonderful thing about tutoring: tutors help students, not by giving the answers or just checking over their work but by helping them learn what works for them.

Since then, I have been a tutor and a teacher myself. English, math, physics . . . the subject does not matter to me as much helping students. Now I have the opportunity to work as a coordinator of a tutorial program, and I get to learn even more as I help new tutors develop their skills.

This book is based on the tutor development program use at the North Carolina State University Undergraduate Tutorial Center. When trying to decide what to call the book, the staff and I discussed what phrases we often use; “put the pencil down” is probably the most common. Of course, excellent tutoring incorporates more than just laying down a writing utensil. The chapters herein detail strategies for questioning skills, learning styles, and direction giving. No matter what you learn about these and other important topics, do not forget to listen to your student and what he or she is telling you. Putting the pencil down is a gentle reminder to create that space where you are not the teacher, where students can learn what they need to learn at their own pace.
1. Introduction

Genevieve, a chemistry tutor, truly enjoys tutoring, saying that she learns as much as her students do. “As a tutor, I try to instill confidence in my tutees. Students will come in extremely frustrated over their homework problems because they cannot figure out how to start or where they went wrong. Together we restart the problem and look at similar examples in their notes and textbooks. A few questions about why they did that step and what are they trying to figure out, and the light bulb comes on as they gain the confidence to take on any problem in the world.

“But tutoring doesn’t just help them—I gain as much as the students do. Tutoring keeps me fresh on basic subjects like chemistry and math, and it helps me become a better leader and a better person. Tutoring introduced me to a diverse group of students, and I get the opportunity to learn how best to work with each one of them. I also get to learn from my peer tutors as we all try to help our students become independent and confident. Sometimes I pass a former tutee on campus and they tell me how well they are doing in an upper level course because they still make study guides like we did together during tutoring. The best part is that I didn’t teach them the material or simply tricks to scrape by on a test. I demonstrated how to learn it on their own, instilling confidence so that they can succeed in any subject.”

Being a peer tutor can be one of the most challenging and rewarding experiences of your academic career. This book is designed to help you develop your skills as a tutor. The first step is to define the role of a tutor.

1.1. What is the Role of a Tutor?

Tutor as a Helper

A tutor’s primary role is that of a “helper.” A tutor does not do the work for the student, but instead helps students learn how to help themselves. The majority of this book, especially Chapters 5–8, focus on strategies tutors can use to help students become independent learners.
**Tutor as a Peer Learner**

Peer tutors are successful students, not experts. They are not responsible for knowing all the answers. Good tutors model the arsenal of successful student skills by acknowledging when they are unsure and by encouraging students to use one of the many other resources available, such as instructors, other peers, and other resources.

**Tutor as a Teacher**

Sometimes it is appropriate for the tutor to act as a teacher by directly explaining things to the student. Chapter 9 explores effective ways to explain material to students.

**Tutor as an Employee**

Finally, tutors are employees who represent both the tutorial center and the institution in which they work. Activities later in this chapter help you learn about your own center.

**1.2. Why Tutor?**

There are many benefits to being a tutor. Some are obvious: You may be receiving course or service learning credit, or you may want an on-campus job that fits into your course.

There are more than just tangible benefits to being a tutor, though. By tutoring a course you have already taken, the material stays fresh in your mind; you will probably develop a deeper understanding of the content. Tutors often find this constant review useful not just in future classes but also in high-stakes tests like the GRE or MCAT.

Being a tutor may also help you become more hirable for future employment. You will improve your communication skills, your ability to think quickly on your feet, and your problem-solving skills (for both discipline-specific and interpersonal issues).

Finally, because a tutor’s primary role is as a helper, many tutors feel the primary benefit is the satisfaction of helping others. Being a peer puts you in a unique place to do just that.

Lev Semyonovich Vygotsky (1978) theorized that learning is an inherently social activity. In fact, although we may be able to do “x” amount of a task by ourselves, we are often able to do more with a little guidance from someone more capable. That extra amount we are able to do is what Vygotsky called the “zone of proximal development” (see Figure 1.1. Vygotsky’s Zone of Proximal Development).

Helping students within that zone is very effective. At times, classes may move too fast or too slow for students. Students do not need help below the zone because they can already accomplish those tasks, and they are often not ready for tasks above the zone until they have mastered easier tasks. As a tutor, you can work closely with students at their specific levels of need.
1.3. Why Tutor Development?

I like to tutor so I can not only help the student, but also so they can help other students. I want not only to help a student learn physics, but also to learn how to be a student.

-J. P.

Often at the beginning of a tutor development program, tutors wonder why they must participate. “I got an A in the class, I know the material backward and forward, and I’ve helped friends in this class. Why can’t I just start tutoring?”

That is a valid question. Have you ever been in a situation where you had difficulty understanding a concept, even though you could tell the person speaking was incredibly knowledgeable about the topic at hand?

The tutor development program in this book does not focus on the content of the course; instead, it focuses on strategies you can use to help students learn how to master content themselves.

1.4. Should You Tutor?

Before you decide whether to be a tutor, it is important to consider if tutoring is right for you. Most centers hire tutors by the semester or quarter; leaving midway through a term not only disrupts the center but also puts your students at an unfair disadvantage.
Therefore, it is best to fully consider the responsibilities now. Exercise 1.1 will help you determine if a tutoring job is a good fit for you. Use this list of questions to assess your interest.

**Exercise 1.1: Do You Want to Tutor Here?**

1. What is the center like?

2. What is the mission of the center? Do you believe in its mission?

3. Whom does the center serve? (First-year students? Developmental students? Undergraduates? Graduate students? Community members?)

4. How does the center serve those users? (Drop in? Appointments? Online?)

5. What are the responsibilities of tutors?

6. How many hours per week is a tutor expected to work? Are those hours guaranteed?

7. When are you expected to work? (Mornings? Afternoons? Evenings? Weekends?)

8. When does the work term start and end? Do you tutor during exams?

9. What training and development must you complete?

10. What compensation do you receive? Is that sufficient for you?

11. What paperwork must you complete?

12. What is the culture of the center?

13. Will you be working with other tutors? Alone?

14. Where will you be working? (Center? Library? Residence hall?)

15. How accessible are your supervisors?

These are some examples of questions you should answer before you commit to being a tutor. Your supervisor will let you know if there are other important issues related to the tutoring center.

Another important question to ask is: “Do I have enough time to tutor?” Complete Exercise 1.2 to help you answer that question.
**Exercise 1.2: Do You Have Enough Time to Tutor?**

Below block out the times when you are . . .

- In class (include commute times if appropriate)
- Have other scheduled commitments (another job, religious commitments, extracurricular activities, family responsibilities)
- Studying (Think about how difficult you expect your classes to be)
- Taking care of yourself physically (Sleeping, Eating, Bathing, Exercising)
- Taking care of yourself mentally (Relaxing, hanging out with friends)

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Now look back at Exercise 1.1, questions 4-7. Does the schedule above realistically allow you to meet the responsibilities of tutoring?
1.5. Making the Commitment

If, after considering Sections 1.1–1.4 and completing the exercises, you decide that you want to tutor, congratulations on making the tutoring commitment! I look forward to sharing your development. This book is designed to help you on that journey.

In the same way that you will tutor students by guiding them, this book is only a guide. You will be asked to reflect on your experiences and complete the exercises to develop your skills. Tutoring, like playing basketball or completing calculus problems, is a skill learned by doing, not simply by watching others.

Each chapter starts with a narrative about an actual tutor’s experience. Then, content is presented. Throughout the chapters, exercises allow you to practice what you have learned and reflect on your growth.

Take a moment to reflect on the upcoming journey by completing Exercise 1.3.

**Exercise 1.3: Hopes and Fears**

1. List at least two hopes you have about tutoring.
2. List at least two fears you have about tutoring.

Discuss your responses with a partner. Are your hopes and fears similar?

1.6. Tutoring Ethics

No matter what kind of tutoring situation you work in, there are certain principles that you need to adhere to for the benefit of the student, the center, and you.

**Protected Classes**

In the United States, harassing anyone based on any of the following classifications is considered unlawful harassment: race, color, religion, sex, national origin, age, disability status, and veteran status. Individual states and institutions may also protect other classes, such as those based on creed and sexual orientation.

Discriminating against someone for any of the foregoing reasons is not just unprofessional, it is **illegal**. Part of your job is to create and maintain a supportive, harassment-free working and learning environment for all people on your campus. You can do that by:

- Keeping compliments casual and impersonal.
- Avoiding jokes, words, phrases, and gestures with racial, sexual, or other inappropriate connotations.
- Remembering that each person has a personal space. Watch for body language that indicates you might be infringing on that space.
Conducting all meetings with students in public areas.

Remembering that your students may perceive a power differential between you. Casual comments may be taken more seriously than intended, and suggestions may be taken as directives.

Of course, as a tutor, you should avoid all harassment, not just the unlawful kind. A form of “legal” harassment would be making fun of a student for supporting a rival baseball team. What might be tolerated between friends comes across very differently when you are in a position of power. Although you might see yourself as just another peer, students often perceive tutors as those in control of their access to services.

Exercise 1.4: Harassment Prevention on Your Campus

It is important to know the policies and procedures on your campus.

1. What classes are protected at your institution?
2. What should you do if you feel harassed?
3. What should you do if you are accused of harassment?

Code of Ethics

Tutors should be ethical in all dealings with students. The ethics required by all tutors falls into six major categories:

- Tutoring Philosophy: I will act in the best interest of my students, following the mission of the institution for which I work.
- Responsibility: I will take responsibility for my own behavior and work to resolve conflicts that may arise.
- Integrity: I will follow the academic honor code of my institution, and I will always promote accuracy, honesty, and truthfulness.
- Respect for individual differences: I will not use tutoring situations to impose my beliefs. I will respect cultural, individual, and role differences, including those based on age, sex, gender identity, race, ethnicity, culture, national origin, religion, sexual orientation, disability, language, and socioeconomic status.
- Excellence: I will strive for excellence by continuing to improve my tutoring skills. I will be open to comments regarding my performance. I will admit my own weaknesses in content or instructional ability and will seek assistance when I need it.

1 The Association for the Tutoring Profession <http://www.myatp.org/> has an ethics statement from which this is modified.
Professionalism: I will always remember that I am a role model and will conduct myself in an appropriate manner. I will not take on a role for which I am not qualified. I will be punctual, maintain records, and keep confidential any information that my student decides to share with me or that I have access to in the helping process. I will not pursue inappropriate relationships with my student.

Exercise 1.5: Tutorial Center Ethics

1. What is the code of ethics at your institution?
2. What surprises you on this list?
3. Do any items confuse you?

1.7. Conclusion

Before committing to being a tutor, be sure that you have the desire and time to do so. It may be that there is another tutoring situation that would fit you better, or that it would be best to start tutoring in a later term. Although tutoring can be a very rewarding job, it also has multiple responsibilities that come with it. Be sure you understand and can follow tutoring ethics.
2. Types of Tutoring

At the beginning of the semester, Johnathon was nervous about being a tutor: “I initially thought that I would have to know everything about the subject matter to be a good tutor. I was afraid that I would be asked questions that I wouldn't know how to answer and that would make me a bad tutor. But I have since realized that I just have to model good student behaviors. Letting the tutee know how I would deal with a problem if I were in the class allows them to see and find new ways to interact with the class and the information provided. This ultimately leads them to be better students and independent learners. I also see that the answer isn’t necessarily the most important point in our sessions. It is the process that gets us to the answer that is more important. So I see now that being a tutor doesn’t mean you are supposed to be an expert in the subject, but just a good student of the subject.”

By the end of the semester, not only was Johnathon comfortable negotiating difficult material, he also saw marked improvement in one of the students he tutored. She understood the material better, and she was more confident taking tests. “It seems to have made her time as a student more enjoyable,” he says. Seeing the confidence of his student rise raised Johnathon’s confidence about being a tutor.

Like Johnathon, many new tutors are nervous about not knowing all the answers. Throughout this book we look at strategies you can use to get around those challenges. In fact, many experienced tutors find that students learn the most when the tutor is unsure of the answer.

2.1. Four Stages of Tutoring

Each tutoring session will be different, but in general, you will complete four stages (opening, goal setting, working, and closing). The following three sections look at different types of tutoring formats. Even if you know which type of session you will be using most often, it is a good idea to read through these descriptions all to see how the stages change as the tutoring time varies.
Opening

Students are often nervous when they start a tutoring relationship. They know they need help with a challenging course, but they may be unsure of what to expect from tutoring. They may feel that requesting a tutor is a sign of failure. Therefore, it is important to start the relationship on a positive note and set the student at ease. No matter how much time you have to work with the student, the opening of a session should contain the following aspects.

- **Be present physically:** Arrive on time, or even a little early.
- **Be present mentally.** Allow yourself time to move mentally from your previous engagement (sleep, class, etc.) to the upcoming one. A flustered tutor does not set a student at ease.
- **Greet the student.**
- **Have a positive attitude.** Show that you are happy to be working with the student. Smile!

Goal Setting

The goal you and a student may have will vary with the amount of time available. Take the time to decide (formally or informally) what should be accomplished in your time together.

Working

Work toward the goals you and your tutee have set using the strategies related in this book.

Closing

Take a moment or two to reflect on what has been accomplished, praise the student’s effort, and talk about next steps.

2.2. Term-Long Assignments

In a term-long assignment, a student and a tutor work together regularly throughout the semester. This format allows the tutor and student the opportunity to develop a strong rapport. Because you will be working together so consistently, the first session should be focused on getting to know each other and setting goals for the term.

**First Session**

Opening

- **Be present physically:** If you are not meeting in a designated tutoring center, be sure to arrange to meet in a specific place. For instance, do not simply say, “I’ll meet you at the library,” but “Let’s meet by the water fountain in the library’s lobby.”
- **Be present mentally.**
- **Greet the student.** Introduce yourself and spend some time getting to know the student. Sharing information about majors and career interests are good topics.
• **Have a positive attitude.**

**Goal Setting**
During this meeting, you will want to spend a lot of time getting to know the student’s goals. Why did he or she request a tutor? What is his or her goal for the term? The answers to these questions should be specific and include more than simply “to pass the class” or “to earn an A+.“ Creating a specific plan is vital when moving from a stated goal to successful performance (Locke & Latham, 1990). Chapter 8 addresses long-term goal setting.

**Working**
Spend some time working on course material. As a tutor, you will begin to notice where the student is having difficulties; the student will also experience some immediate successes. The rest of this book addresses specific techniques for tutoring.

**Closing**
End on a positive note and leave five to ten minutes for wrap-up. Emphasize what the student has accomplished in the session by having him or her write a summary of important concepts to refer to in the future.

Make sure the student leaves knowing what he or she should accomplish before the next session and the relevant logistics (such as day, time, and location) for the next meeting. Close with a final positive statement, such as “I’m looking forward to our next meeting.”

**Subsequent Sessions**

**Opening**
After the first session, you probably will not have quite as extended an opening conversation before getting to work. If the student mentioned in the first session that he enjoys intramural soccer, ask him if he has had any recent games. Also, asking “How’s class going?” can give you a lot of information, not only by what the student says but how he says it.

**Goal Setting**
Finding out about the class also leads into goal setting. Ask the student what has been discussed in recent classes. Ask her to share her class notes and show you a particular topic she finds difficult. If the tutee cannot identify such a place, pick a day and ask her to explain the material to you.

Once you have a feel for what the student needs to or would like to work on, it is a good idea to articulate the plan for the session. For example, “Since you’re having trouble understanding the difference between subjective and indicative verbs, let’s review what your professor said first. We can look in the book if we need more clarification. Then we’ll work through some practice problems. Okay?”

As the semester goes on and you get a rhythm for working together, let the student set the goals for the session if he or she is able to do so.
Working

When you reach a point at which the student says, “I don’t understand” or “I don’t know how to do this problem,” it is very easy to just start explaining, but resist this impulse. Chapter 4 looks at some of the theory for why this is not the most effective practice and Chapters 5–8 address specific alternate strategies you can use.

In general, instead of lecturing to the student, identify what the student understands and what is the specific area of confusion. Remember Vygotsky? Your questions may be enough of a push to help the student succeed.

Also, refer back to class materials. Try questions and/or directions such as, “What did your professor say about this?” “Tell me what you do know about this concept/topic.” “Show me an example related to this.” “Where is this section in your textbook?” You might ask the student to rework a problem from his or her notes without looking at the solution, recall definitions or theorems, or highlight the most important points from his or her notes. Do not try to cover everything—move at the student’s pace, encouraging him or her to talk as much as possible.

Closing

During the last five to ten minutes of the session, evaluate how well the goals were met. Is the student able to accomplish practice problems without your help? Can the student explain the concepts, processes, and/or procedures you addressed? Be sure to have the student write down the important points from tutoring so that he or she can refer to this information later.

Also ask the student about upcoming material and assignments. Together, make a plan for what the student should do before the next session to solidify understanding of the material covered and prepare for the next session.

2.3. One-Time Tutoring Sessions

In one-time tutoring sessions, students often make a thirty-minute to an hour-long appointment with a tutor on an as-needed basis. They will not necessarily meet with that tutor regularly throughout the semester. Nevertheless, the four-stage process is still important, although it is abbreviated.

Opening

Tutors often get into a routine when they work regular shifts every week, especially if it is filled with one-time sessions. They can get preoccupied and forget that each student needs to be greeted warmly and welcomed to the tutoring environment. This problem can be magnified when the center gets busy and tutors have many back-to-back appointments.

However, you should be mindful that the opening of a session is extremely important to the student. Most students in this setting are infrequent visitors and may initially be unfamiliar with what to expect from the session. Consider the following scenario:
Tutor: [asks while looking down and completing paperwork for the previous session]. “Are you Sara?”
Sara: “Yeah.”
Tutor: [still looking down]. “You can have a seat there.”

This certainly is not a very welcoming environment. The four rules of thumb in Section 2.1 still apply: be on time, be present mentally, greet the student, and have a positive attitude.

**Goal Setting**

Setting goals in one-time sessions is still important. Is the student looking to review a few disparate concepts before a test? Trying to master one very difficult concept? Completely lost? Setting goals for the session can help you both pace your time together.

**Working**

Strategies used in a one-time tutoring session will probably be very similar to those used for term-long tutoring. You can use the indirect techniques discussed later in this book to identify how much a student can do on his or her own.

**Closing**

Be very mindful of the clock so that appointments start and end on time. During the last five minutes of a session, have the student explain what he or she has learned and write down this information in a “tutoring notes” section so that he or she can refer to it later. Also, if appropriate, encourage the student to schedule another session and/or use resources such as the instructor and other students.

### 2.4. Drop-In Tutoring Sessions

Drop-in tutoring sessions are popular among students because they do not need to plan ahead to schedule an appointment. Students may be studying alone and then want immediate help when they become confused. Because there may be only a few tutors for many students, tutors must negotiate multiple priorities. Nevertheless, the four-stage process still holds.

**Opening**

Drop-in tutors should remember that not all students are familiar with the policies and procedures of the center. Though you probably will not have time for a get-to-know-you conversation, you should still be pleasant and fully present. Sit down next to the student to make him or her feel comfortable. It can be very disconcerting to have someone standing over your shoulder peering at your work.

**Goal Setting**

Goal setting may seem even more unlikely in this setting, but make sure you listen carefully to the student. Wait for him to finish explaining his questions. Is he having a hard time getting started? Becoming confused in the middle? Has he tried the problem multiple ways but still cannot get the right answer? The answers to these questions will help you decide how to approach the working segment.
Working

Depending on what information you gathered from listening to the student, use the student’s previous attempts, notes, and books to assist him or her. Avoid the temptation to lecture to spend less time with the student.

Closing

At the end, resist the temptation to rush to the next waiting student. Watch for non-verbal signals that let you know if the student understands. Also, encourage the student to work without you for a while: “You’ve got the right set up. See how far you can get, and call me over if you get stuck.” This encourages the student to be an independent learner while still maintaining a helpful and pleasant tone.

Exercise 2.1: Opportunities and Challenges

In which type of tutoring would you find it most challenging to tutor? To be tutored? Why?

2.5. Conclusion

No matter what tutoring situation you work in, your goal is to help provide an environment where a student can learn. Following the four steps of opening, goal setting, working, and closing helps you and the student communicate and learn effectively.
3. Cultural Differences

When Kimberly tutored a student who was nontraditionally aged (i.e., not between eighteen and twenty-two years old), she realized how different her culture was from his. “When I was discussing his study habits,” she describes, “I quickly realized that this man had two jobs, a wife, a kid, and was going back to school, whereas my only priority is school work and tutoring. While I can spend all day doing homework, he has to balance so many things.” She had to readjust her approach “because with previous students I would give lots of suggestions for how to study like writing lots of outlines and making flashcards. I realized, though, that it wasn’t very feasible for him, so I had to reassess how we could help him study most efficiently. Overall, I think it makes me take into account the different ways that people do things. I’ve stopped giving so many personal examples about what works for me; I now offer different ways of doing things.”

It may seem odd to start talking about differences before similarities, but I want to emphasize from the very beginning that when I discuss successful strategies, they are necessarily generalizations. Every institution, every tutor, every student is unique. Looking at the multiple ways we differ can help us choose appropriate strategies and reflect on the effectiveness of our choices.

Because this book is only an introduction to tutoring, a full discussion of cultures and intercultural communication is beyond the scope of this section. Instead, this chapter is designed to get you thinking about your own culture and the ways it may affect your tutoring relationships.

3.1. What Is Culture?

When we think about culture, we often think about very clear, visible attributes: food, music, dress, and crafts. But culture is much more than what we see; it is a set of “values, beliefs, and practices shared by a group of people” (Ziegahn, 2001). These values are so ingrained into the community that members often do not notice them.

**Exercise 3.1: Defining My Culture**

Imagine that someone asked you, “What is your culture?” How would you respond?
Culture is not simply racially, ethnically, or internationally based. Every group has shared values, beliefs and practices. Rural and urban environments can be very different; different schools or colleges within an institution can have vastly different cultures; every family has its unique culture. Nor is culture constant. As situations change, cultures adapt to them. Years ago, cell phone etiquette did not exist, but as more people carry these devices, cultures responded by accepting their constant use (they are used ubiquitously while walking around campus today) or by shunning them (San Francisco considered fining people for using them during public performances, see Gordon, 2006).

Our identity is developed through our membership in multiple cultural groups. To extend Exercise 3.1, consider your identity in terms of the following areas.

<table>
<thead>
<tr>
<th>Exercise 3.2: Defining My Culture, continued</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you describe yourself in terms of:</td>
</tr>
<tr>
<td>1. Gender</td>
</tr>
<tr>
<td>2. Ethnicity</td>
</tr>
<tr>
<td>3. Race</td>
</tr>
<tr>
<td>4. Religion</td>
</tr>
<tr>
<td>5. Age</td>
</tr>
<tr>
<td>6. Socioeconomic status</td>
</tr>
<tr>
<td>7. Sexual orientation</td>
</tr>
<tr>
<td>8. Language</td>
</tr>
<tr>
<td>9. Physical/mental ability</td>
</tr>
<tr>
<td>10. Education</td>
</tr>
<tr>
<td>11. Political views</td>
</tr>
</tbody>
</table>

Which of these areas are most important or significant to you in your daily life?

If you are a member of a majority group in your community, defining your culture in Exercise 3.2 might have been difficult. You may not consider your language as something that is culturally based if you spend most of your time around people who speak as you do. We often clearly see how we are different from the norm that surrounds us, and that helps define our identity. It is important to recognize that our identity is affected by all aspects of our culture.
When we grow up within a homogenous culture, we often assume that our culture’s way is the “normal” or “right” way to do things. As an old saying goes, “I don’t know who discovered water, but I’m pretty sure it wasn’t a fish.” When we are immersed in something from the beginning of our lives, we often are not aware of it until we are either out of it or interact with someone who is not from it. Just as a fish probably never thinks that it is possible to gather oxygen anywhere other than the lake in which it lives, we may not think about different worldviews until we are exposed to them. We can prevent that suffocating feeling that fish feel out of the water by learning more about our environment and others.

All of the areas listed in Exercise 3.2 affect our worldview. To help us see how we may be different from others, let’s look at some common ways culture can differ. Florence Kluckhohn and Fred Strodtbeck (1961) identify five ways cultures may orient their values:

- **Human nature.** Does the culture see humans as generally good? Evil? Neutral? A mix? Is human nature fixed in that category, or can it change?
- **Humanity’s relationship to nature.** Does humanity control nature? Or is it controlled by nature? Are the two in harmony?
- **Time.** What is most important: the past and learning from history? The present and being aware of the current moment? The future and how it can be better? Is change over time an improvement or a loss of heritage?
- **Activity:** Is it more important to develop an awareness of one’s self (“being”) or to get things done (“doing”)?
- **Relationships.** What is more important: the goal and welfare of the group or the individual? Cooperation or competition?

Clearly, one culture may value many points on each of these continuums, but in general, one is the most valued. In the United States, “middle America” (white, male, middle-class, and Protestant) is certainly aware of the past and present, but the focus tends to be on the future: get into a good college, get a good job, and plan for a financially secure retirement. That focus also illuminates another orientation: that of activity, of *doing* something to make those events happen. And middle America values the results most when they are achieve individually; the “self-made man” is an important archetype.

**Exercise 3.3: My Value Orientation**

Consider the five value continuums just discussed. What is your worldview? What do you value?

- Human nature
- Humanity’s relationship to nature
- Time
- Activity
- Relationships
3.2. Why Culture Is Important to Tutoring

Why spend time talking about whether we believe humanity controls nature or is controlled by it? It matters in two ways: (1) intercultural communication and (2) educational preferences.

Because one individual can identify with many cultures, it is unlikely that every person you meet will match your cultural identity exactly. Even though a person may look and sound like you, he or she may have different values and assumptions. The most important skill for intercultural communication is listening, which we discuss in Chapter 5.

Another way to improve communication is to know about ourselves and others. As long as we remember that each person is an individual first and a representative of a culture second, we can use general information about cultures to inform (not restrict) our tutoring sessions.

For instance, as Barbara Rogoff (2003) explains, even the notion of intelligence and maturity varies between cultures. The focus may be on abstract problem solving, social responsibility, eloquence, or any number of other cultural values. The differences in values are reflected in the schooling (both formal and informal) that a culture provides its children.

Howard Gardner (2005) proposed a theory of multiple intelligences. Western education has typically favored verbal and quantitative skills (which we can see through the IQ tests, achievement tests, and general education programs that it creates). Gardner’s theory, however, points out other ways to value intelligence. He defines intelligence as the ability to solve problems and produce products that are valued by a culture.

- **Linguistic intelligence** is the ability to effectively use language.
- **Logical-mathematical intelligence** is the ability to use mathematics and deductive reasoning to solve problems.
- **Spatial intelligence** is the “ability to form a mental model of a spatial world and to be able to maneuver and operate using that model” (49).
- **Musical intelligence** is the ability to create music.
- **People with bodily/kinesthetic intelligence** are able to solve problems using one’s motor skills. Dancers and athletes are clear examples, but so are craftspeople and surgeons.
- **Interpersonal intelligence** is the ability to understand other people.
- **Intrapersonal intelligence** is the ability to understand one’s self.
- **Naturalistic intelligence** is the ability to understand the environment.

Each person has differing strengths and weaknesses in all scales, but these larger values play out in the details of education as well. For instance:
Speed is valued as a sign of intelligence in a Westernized community, but a more reflective, deliberate practice is valued in others like Ugandan and Navajo communities (Rogoff, 2003).

Eye contact and physical space are two nonverbal cultural traits that people respond to differently based on their culture (Olaniran & Williams, 1995). For example, in the United States it is considered a sign of respect to look at someone directly in the eyes; however, avoiding eye contact with authority figures is a sign of respect in many Asian, Latin American, and Caribbean cultures (Dresser, 1996).

“In tests, as in many Western schools, reliance on a companion for help may be considered cheating, whereas in many cultural settings, not to employ a companion’s assistance may be regarded as folly or egoism” (Rogoff, 2003, p. 249).

Culture also affects how we communicate. Robert Kaplan (1966) compares the linear, bluntly clear writing of academics in English to those of other cultures who might value surprise, creativity, and depth over linearity.

<table>
<thead>
<tr>
<th>Exercise 3.4: My Education Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>What cultural values that you listed in Exercise 3.3 do you see affecting your educational preferences?</td>
</tr>
</tbody>
</table>

3.3. Conclusion

All people with whom you interact have their own cultures, as do you. Understanding how your culture influences your beliefs can help you interact with people from all walks of life.

Although these examples used in the book are generalizations, they demonstrate how culture can affect one’s educational history. Throughout the rest of the book, we look at more examples of how our cultures can affect our tutoring relationships. Keep in mind, however, that not all individuals from one culture will hold the same beliefs.
4. Structuring a Session

Liz, a physics tutor, shares her experience tutoring: “I’ve been trying to work on decreasing my talk ratio (that is, how much I talk, versus how much the student talks). I noticed that I’d been doing the majority of the talking, which didn’t leave my student much room to try to work things out on his own. In my past few sessions, I’ve made it a point to ask him to show me, step by step, either how he had tried to work a problem out or how he would tackle it. For example, right after fall break he had a test, and he brought the practice test to our session to work on. He had already done most of it, but he was having trouble with the last few problems. Instead of jumping to an explanation, I asked him to show me each step he would use to solve the problems. Then when he had a question, I asked him to show me where that topic was in his notes and explain the closest example he could find. Finally, I asked him to draw a diagram and point out what was going on and how he could use that to write the equations he needed. Because of this, he spent a lot more time talking and I didn’t end up having to say very much at all—he virtually walked himself through the solutions for all of them.

“That was almost an ideal case, and I don’t think it’s possible for things to always go that smoothly, but it did convince me that slowing down and letting the students try talking their way through things first can be a very effective method. I’ve noticed that my talk ratio in the past few weeks has been consistently lower, so I think I’m making progress.”

Exercise 4.1: Positive Learning Situations

Think for a moment about your most positive learning experience—a time when you loved what you were learning and learned it well. It may have been in a traditional classroom or it may be from another experience.

With that experience in mind, answer the following questions:
1. Who was your teacher/guide/mentor(s) in this situation? What did he, she, or they do to help you learn?

2. Did you respond differently to this learning situation than to other learning situations? Were you more active? Did you continue working when you did not “have to”?

3. What aspect of that learning experience would help you most in a learning situation that you do not enjoy?

Discuss your answers with other tutors. What are the similarities? Differences?

4.1. Expert vs. Novice Learners

If you are hired to be a tutor in a particular subject, you know that subject very well. You know the patterns of thinking that work, you have access to knowledge that helps you solve problems, and you have the desire to know the subject. These are all attributes of expert learners. Although you may not have a PhD in the subject you tutor, you are able to learn it effectively. One of the most important ways you can help students is to model those expert learning skills. To do that, though, we must first look at the differences between expert and novice learners.

Two main differences between expert and novice learners are summarized from Bransford et al. (2000):

- Experts see patterns and information that are not seen by novices.
- Experts have a lot of background knowledge in the subject and a thorough understanding of interrelationships, whereas novices do not.

A key thing to remember is that expert and novice learners exist on a continuum. One is not a novice until spontaneously becoming an expert. Instead, we learn little by little, day by day; over time, our brains begin acting more like an expert’s than a novice’s.

Experts often see beyond surface features to deeper connections. In a study that watched how novices and experts classified physics problems, it was found that novices tended to group problems together that had similar pictures or similar key words. For instance, all the inclined plane problems were together. Experts, on the other hand, grouped problems based on concept: one inclined plan problem was in the “Energy Conservation” group and another was in “Newton’s Second Law” group. The experts were able to look beyond surface to see conceptual patterns (Chi, Feltovich, & Glaser, 1981).

Experts also have developed ways of retrieving information smoothly. This does not mean they immediately solve a problem but that they are able to use their knowledge to follow a path to the correct solution and not get sidetracked. In a study of x-ray diagnoses by novices and experts, the experts were able to quickly identify which part of the x-ray film they should attend to so as to discover the rare diagnosis (Lesgold et al., 1988). Even though they spent about the same amount of time on the x-ray as novices, experts were able to focus their time and attention on the most important points.
Do not equate being an expert in one area with being an expert in all areas, however. Throughout our lives, when we start learning something new, we are novices. When I began woodworking, I had to learn lots of information. What is the difference between a rabbet and a dado? Which joint is best for which application? What skills and tools do I need to complete a project?

These are all questions an expert could answer quickly. Because it takes all my energies to produce consistently square joints, my projects tend to have fairly simple joints, though they are getting more complex as I progress. Experts, who can easily access information and consistently use it appropriately, can spend more time on creating elaborate projects.

Our goal as tutors is to help students progress along the continuum from novice to expert. We do that through indirect techniques, discussed in Section 4.4.

**Exercise 4.2: Am I an Expert?**

1. Do you see yourself as an expert learner in the subject you tutor? Why?

2. In which areas of your life are you a novice? How does learning in that area compare to learning in your area of tutoring?

### 4.2. Child vs. Adult Learners

Another major theorist on learning development, Malcolm Knowles, conceived of a progression from a child learner to an adult learner. Although I do not necessarily agree with the age distinction (you can probably think of examples of young “adult learners” and older “child learners”), Knowles’s description of adult learners has some key attributes that affect learning (Knowles et al., 1998).

**Adult Learners**

- Learn material because they want to apply it, not just to pass the test.
- See themselves as being responsible for their learning instead of at the mercy of an instructor or subject.
- Bring their “life experience” to the learning situation and value it; they do not just accept everything the teacher/textbook says.
- See learning as a tool for solving a problem or completing a task.
- Are motivated by internal factors (self-esteem, desire for a higher quality of life), not just external factors (grades, teacher approval).
4.3. Structuring a Session

During your tutoring experiences, you will see a variety of students. Examples include:

- A student who seems to grasp the material in your sessions yet does poorly on exams.
- A student who is very successful, and you wonder why they requested tutoring.
- A student who is studying very hard but is still not grasping the course content.
- A student who you believe could be very successful in the class, if she would put more time into the course.

Understanding the differences between expert/novice and adult/child learners can help determine how much structure to apply in each session. Note that the terms adult, child, expert, and novice are meant to help conceptualize the difference between your students, not compartmentalize them. Although the traits appear dichotomous, each is a continuum that we can help students move along.

One of the ways tutors help students move along these continuums is through the amount of structure provided in a session. Structure is the frame that we as tutors provide (or do not provide) to the
session. The two theories about learning affect the two parts of structure: session direction and tutor support.

**Session Direction:** Who decides what to work on during the session? In a highly structured session, the tutor will make decisions about how to spend the session or frequently help the student with this decision. In a session directed by the student (low structure) the student will decide what material to work on and how long to work on it.

**Tutor Support:** How frequently does the tutor provide support when the tutee is working on specific content? In a highly structured session, the tutor will step in frequently to ask guiding questions, direct the student to a specific resource, or give feedback. When the tutor support is less frequent and the student can answer many of the questions, the structure is low.

**Exercise 4.4: What Kind of Learner Am I?**

Think of a subject you enjoy.

1. Do you learn the material because you want to understand it fully? Or simply pass the test?
2. Why do you make the grades you make? Is it your study habits? Innate intelligence? The nature of the tests?
3. Do you question the teacher? The textbook? Why?
4. Do you apply your learning from one class in other classes or situations?
5. Why do you want to learn the material?

Now, think about a course you do not like and answer the same questions. Are your answers the same?

In general, adult learners will decide what concepts they need to study, whereas child learners will need more assistance. Ask yourself the following questions to decide whether the student needs more session direction:

- Can the student identify which concepts are important and difficult?
- Can the student gauge his or her understanding of the concepts?
- Can the student study effectively?

If a student is not performing as well in the class as she would like, tutors should consider providing more session direction, even if the student wants to direct the session herself. Any student may come to a session and say, “I need help with the third homework problem,” and for some, working through that problem is an effective use of their time. For others, however, working on a single homework problem will not lead to a significant change without addressing other issues first. For instance, is the student trying to
move ahead without understanding fundamental material? If so, working on new homework problems will not help that student succeed in the long run. Decide how the time in the tutoring sessions should be spent to maximize the student’s short-term and long-term success.

In general, expert learners are able to use resources well, whereas novice learners need more assistance processing the course material. Ask yourself the following questions to decide if the student needs more tutor support:

- How much guidance does the student need while working through a problem?
- Is the student able to make connections among the material?
- Is the student able to see patterns?
- Is the student able to use resources to solidify understanding?

Table 4.1 encapsulates my primary view of tutoring: different students need different types of tutoring. There are some tutor trainers who believe in “minimalist tutoring” and letting the student do all the work. In general, letting the student do as much work as possible is a good idea, but there are times when a student may be working hard but not really getting anywhere. As a tutor, you can offer the kind of help a student needs when and where he or she needs it.
Exercise 4.5: Deciding on Structure

Look at Table 4.1 and answer the questions:

What would be the goal for working with the student? What would you do in your session?

<table>
<thead>
<tr>
<th></th>
<th>Child Learners</th>
<th></th>
<th>Adult Learners</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Session Direction:</strong></td>
<td></td>
<td><strong>Session Direction:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Tutor</strong></td>
<td></td>
<td><strong>Student</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Novice Learners</strong></td>
<td>The novice/child learner has trouble grasping material because he or she is not studying enough or effectively. Student is not performing well and may not be able to identify why. May have difficulty grasping basic principles presented in resources and may not retain information between sessions.</td>
<td>The novice/adult learner is highly motivated and studies a lot. He or she may be able to identify conceptual difficulties but is having difficulty using resources for better understanding. Might be studying a lot, but not the important issues.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tutor Support:</strong></td>
<td>Frequent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Expert Learners</strong></td>
<td>The expert/child is able to learn relatively easily from class and resources, but may not be persistent or use all resources fully. May not be performing well on exams because of overconfidence. Probably has experienced previous courses where minimal studying was effective.</td>
<td>The expert/adult learner is able to identify weak areas of content, is doing well in the course, and is able to use resources effectively. Might need reassurance; might be going above and beyond classroom expectations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tutor Support:</strong></td>
<td>Limited</td>
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</tbody>
</table>
Following are my answers to Exercise 4.5:

- **Novice/child learners:** The goal is to hold the student accountable for studying and help him or her learn how to use resources. The student must take responsibility for studying before significant changes will occur. You can both teach this student how to use resources and hold him or her accountable at the same time. Potential strategies to use:
  - Motivation check: “Child” learners may want a quick fix; they may not want to study. Have a conversation about goals and willingness to work to achieve them (see Section 7.2).
  - Time management check: Even if a student is willing to work, he or she may have taken on too much. Do a time management check (see Section 7.3).
  - Frequently refer to the student’s resources such as notes and textbooks: Help the student learn how to use these resources and do not let him or her rely on you for the answers (see Section 7.5).

- **Novice/adult learners:** The goal is to help the student use resources more effectively. He or she may be studying a lot but not improving his or her grade. Potential strategies include:
  - Frequently refer to the student’s resources, such as notes and textbooks (see Section 7.5).
  - Provide multiple opportunities for practice: Work on similar tasks until the student has demonstrated that he or she fully understands the material.
  - Test prediction and preparation: Work with the student on discovering different ways a professor could ask about the same material and rehearse that material frequently (see Section 7.8).

- **Expert/child learners:** As with novice/child learners, the goal is to hold the student accountable. Until the student is willing to put forth effort outside of the tutoring session, there is little one can do to help him or her. Potential strategies include:
  - Motivation check (see Section 7.2).
  - Time management check (see Section 7.3).

- **Expert/adult learners:** The goal is to help with content that is not easily accessible in the classroom lecture, textbooks, or other sources. Potential strategies include:
  - Help the student use other resources, such as web sites and other textbooks.
  - Help the student clarify questions to ask the professor.
  - Offer positive reinforcement (see Section 6.1).
By choosing appropriate goals for the session, tutors will encourage students to move along both the novice/expert and adult/child spectrums. Note that in no case does tutoring include doing the work for the student. Instead, you can use indirect techniques, such as those described in Section 4.4.

**Exercise 4.6: Structural Preferences**

1. What are the challenges of a session with a novice/child learner? Benefits?

2. What are the challenges of a session with an expert/adult? Benefits?

3. Which would you prefer? Why?

### 4.4. Indirect Techniques

It can be difficult for a tutor to watch a novice learner struggle with material. You are probably a tutor because you want to help people. You like it when you see a wave of understanding pass over someone’s face. You probably dislike watching someone struggle.

However, a good tutor knows when someone’s struggle is worthwhile. If someone else always carried a heavy load for you, you would never have the muscle strength to carry it by yourself. If your friends always introduced you to new people, you would have more difficulty if you moved where you did not know anyone and had to initiate new relationships yourself.

Likewise, if you as a tutor are always doing the heavy “mental” work when tutoring, your student will have a harder time not only on tests but also in future courses when a tutor is not available.

Tutors should help students but not become their crutch. Fortunately, research has shown that there are strategies that foster dependence and those that foster independence (Grow, 1991; Brown et al., 1989). Indirect techniques—strategies that you as a tutor use to get a student actively learning (whether by working silently, thinking quietly, or discussing with you)—help a student become independent.

Simply telling someone something is often not enough to help him or her learn. Imagine if calculus was taught simply by stating facts: “Differentiation is the rate of change, so it is graphically represented by the slope of a tangent line to a curve.”

A young child could learn to repeat those words, but that does not mean she understands it. In fact, tutor explanations have been linked to “shallow” learning, learning that is merely repetition of facts, and not deep understanding (Chi, Siler, Jeong, Yamauchi, & Hausmann, 2001).

Instead, when students do more, when they talk through problems and find errors themselves, they are more likely to have a deep understanding of the subject (Chi, de Leeuw, Chiu, & LaVancher, 1994; Chi et al., 2001). Lecturing students can actually discourage thinking about a topic because the students must keep up with the lecturer’s pace and not their own (Bligh, 2000, p. 31).

Chapters 5–8 discuss ways to get students to do more, talk through their thinking, and take control of their learning. You will also learn ways to give feedback that encourages students to keep trying and
ways to counteract some typical problems tutors and students face. In Chapter 9, we consider how to explain things effectively when indirect techniques are not appropriate.

Exercise 4.7: Learning Directly and Indirectly

Look back at your answers for Exercise 4.4. Was the learning situation you described one in which the mentor “directed” you a lot, or one that let you have more control?

4.5. Conclusion

As a tutor, your main goal is to help students become independent learners who can use all their resources fully. We help students become independent learners by using indirect techniques.

It is important to offer only the amount of assistance that students need to get past their difficulties. Doing too much does not help them move along the continuum from novice to expert learner. If you are working with a student regularly, try lessening the amount of structure you give so that the student has the opportunity to succeed alone.
5. Getting Students to Talk

Dan has been working hard on getting his students to talk by increasing his wait time for their responses. “Even though it can sometimes be awkward sitting there looking at my students for several seconds on end,” he says, “I remind myself that it is important to give them enough time to think through things on their own before I give them hints. One thing I have noticed with my student James is that many times he has known the right answer but has, for some reason, been afraid to say it in case he was wrong. In the future, I am going to encourage him to say what he is thinking. It is okay if it is wrong; if he was always right, he wouldn’t need me!”

5.1. Why Should You Get Students to Talk?

What do you do when you hear a lecture? Are you focused on every word the professor says? Perhaps you are really engaged by a lecture, but if you are like most students, your mind wanders. Benjamin Bloom (1953) conducted a study that showed that students listening to lecture were thinking irrelevant thoughts over 30 percent of the class time (and that was well before laptops and texting). Students who participated in a discussion had fewer than half the amount of irrelevant thoughts and were thinking at a deeper level.

When listening to a lecture, it is easier for students to be passive learners: they sit, listen, and, ideally, write down notes. But aside from selecting which information is important (a skill that can be very difficult), they do not have to think (Bligh, 2000).

Although lectures can be useful for transferring information, they are not useful for learning how to do a new task. No one would try to teach someone how to pitch a curveball by simply talking. The coach may model and guide, but the player must put her hands on the ball. She must do the action.

Likewise, one learns how to translate German, solve math problems, and compose speeches by translating, solving and composing them oneself, not by watching someone else do it.
As tutors, we ask various questions to help students do more thinking. Though the benefits of verbalization are clear in the research (Bligh, 2000; Chi et al., 1994; Webb, 1989), students do not always like it. Many students ask, “Why can’t you just tell me the answer?” In one study in which the same instructor used two different teaching methods (lecture and lecture with group discussion), the students in the active learning section performed six points better on their final grade, but they rated the course and the instructor much lower than their lecture-only peers (Lake, 2001).

Just because something is good for you does not mean you will like it. Telling students about the benefits of trying the work and talking through their thinking can help them become more willing.

Verbalization is important not just because it helps student retain information; it also helps the tutor. As you listen to a student’s explanation of his or her thought process through a problem, you can pinpoint the area of difficulty. Is it a conceptual problem, a piece of information the student does not know, or a mathematical error?

Using questions can also give you time to think. You are not expected to be an expert in the topic. We all forget material or need time to process important information. Listening to the student can give you the chance to think about the concepts.

When the student does more of the work, he retains ownership of the problem. “My tutor did this problem and got it wrong” is not an excuse. Instead, the student knows what he did and why he did it. Also, when the answer is right, he gains confidence. Watching someone else win is very different from winning yourself.

**Exercise 5.1: Benefits of Student Verbalization**

1. Have you experienced any of the described benefits either as a tutor or a student?

2. Are there other benefits you can think of?

**5.2. Question Types**

Here are four ways to classify the questions tutors ask.

**Divided by Topic**

- **Affective questions** are about a student’s emotions. Sometimes tutors focus so heavily on the content that they forget to pay attention to affective issues.
  - How are you?
  - How’s your week going?

- **History questions** look at the history a student has with the topic. This can be a helpful indicator of the student’s experience.
  - Have you seen this topic in calculus before?
  - Did you take physics in high school?
Study habit questions look at how the student is using class time, studying time, notes, books, and other materials.

- How did you study this type of problem?
- When you read the book, do you work the example problems without looking at the solution?
- Have you memorized the quadratic formula?

Metacognitive questions: Metacognition is a big word for an important concept. *Meta* means *beyond*, and *cognition* is *thinking*. Thus, *metacognition* is beyond thinking. It is the ability to think about how you think, learn, understand. Being able to accurately evaluate one’s learning is associated with higher academic performance (Nietfeld et al., 2005). Metacognitive questions ask the student to identify and evaluate how he or she is learning.

- What material troubles you?
- Are you benefiting from reading the material?
- What was troublesome in today’s lecture?

Content questions are about the concepts and ideas covered in class. The next three sections look at different ways of categorizing content questions.

- Tell me what is happening in this graph.
- What is the past participle of this verb?
- Would the acetate ion react in this case?

These question types are somewhat arbitrary. One question can fit into multiple categories. For instance, “How was the test?” could be interpreted in multiple ways:

- How did you feel about the test? (Affective)
- Were the kinds of questions you predicted on the test? (Study skills)
- Did you know how to solve the problems on the test? (Metacognitive-evaluative)

It is not as important to be able to classify each question as it is to remember that you will want to have information about all five areas of a student’s academic life to tutor effectively. Although you may not ask all types of questions in each session, they are useful to have in your toolkit.

Closed and Open-Ended Questions

Closed questions are those that have a factual answer and are concrete.

- What is a radius?
- What is the subject of the sentence?
- Is this the correct method?

Closed questions are very useful for checking to see what factual knowledge your student has. There are some disadvantages, however.
First, since closed questions have a correct answer, they can be riskier for students who are unsure. In the opening to this chapter, Dan describes a student who is unsure of answering. In Chapter 6 we discuss ways you can offer feedback that encourages students to try anyway.

Second, closed questions do not test the big picture. When asked “what is a derivative?” a student may be able to tell you that the derivative is the rate of change. But that answer does not mean the student can apply that knowledge to a problem or relate it to a tangent line.

Third, closed questions can promote dependency on the tutor. In fact, they can quickly impose the tutor’s ideas onto the session. Consider the following algebra equation:

\[ x^2 - 2 = 6x^2 + 14 \]

If the tutor asks the following questions, how much thinking did the student have to do?

- What happens if you subtract \( 6x^2 \) from both sides?
- What’s \( x^2 - 6x^2 \)?
- And then if you add 2 to both sides?
- And divide by \(-5\)?

The student has to complete the calculations, but the tutor is giving all the steps for the problem via closed questions. The control of the problem solving is in the tutor’s hands, not the student’s. Although this may be your intent (see the previous chapter on Structure), recognize that you are doing a lot of the work.

Open-ended questions require a longer explanation than closed questions. There are multiple ways to answer the question correctly that are especially useful for questions about concepts, theories, and other more abstract concepts than simple facts.

- How do you find the limiting reagent?
- Why did you use that method?
- What still seems unclear?
- How could we use Newton’s Second Law to explain the motion in this problem?

An open-ended question gives you more information about what the student knows and puts less of the control in your hands. Although you still choose the topic of the question, the student has more options in how to answer it. This helps the student accept more responsibility.

Soonja Choi (1991) did an interesting study of how students respond to yes/no questions (a type of closed-ended question). In the US, when someone asks a negative question like “Wasn’t John at the party?” the listener assumes the speaker thinks that John really was at the party. The Korean and French speakers in this study did not hold that assumption because their languages have different structures for whether the speaker believes the answer to be true or false.
Open-ended questions have limitations as well.

First, open-ended questions are often “harder” than closed ones, so students might be frustrated if you continually ask questions they cannot answer.

Second, open-ended questions take up more time. If you think the student only needs a little hint, a well-chosen closed question like “What’s the definition of acceleration?” may be enough to move the student along.

**Bloom’s Taxonomy**

Another way of organizing questions was classified by Benjamin Bloom (1956). There are six levels of questions: memory, comprehension, application, analysis, synthesis, and evaluation. The first three levels are particularly useful for tutors.

- **Memory-level questions** test whether the student knows details that are required to solve problems and understand large concepts.

  - What’s the acceleration due to gravity?
  - What’s the definition of a Lewis acid?
  - What is a thesis?

- **Comprehension-level questions** require more work than simply repeating details. The short reply shows that the student understands the concept.

  - Energy input—what do you think that means?
  - What does it mean if something is oxidized?
  - What happens to the nitrogen in going from NO₃ to NO?

- **Application-level questions** require the student to use the information to solve a problem.

  - How would you do that?
  - What other form could you change it into in order to make it easier to solve for \( x \)?
  - How could you find out how much copper is left if you know these details?

Most of what tutors ask in terms of content questions fall into the first three categories in Bloom’s taxonomy. But analysis, synthesis, and evaluation questions are useful for encouraging metacognitive evaluation.

- **Analysis-level questions** ask a student to break down material into individual pieces.

  - What information does this word problem give you?

- **Synthesis-level questions** encourage a student to combine elements into a new pattern.

  - So if you know these pieces of information, how can you calculate the force on the block?
Getting Students to Talk

- **Evaluation-level questions** ask the student to make a judgment.
  - What topic is most difficult for you?
  - Have you studied enough?

Below is a list of verbs associated with each level in Bloom’s Taxonomy. Keep in mind that this list is not exhaustive.

**Table 5.1. Verbs Associated with Bloom’s Taxonomy**

<table>
<thead>
<tr>
<th>Question Category</th>
<th>Associated Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>Count, Define, Describe, Draw, Find, Identify, Label, List, Match, Name, Quote, Recall, Recite, Sequence, State, Tell, Write</td>
</tr>
<tr>
<td>Comprehension</td>
<td>Classify, Conclude, Convert, Demonstrate, Discuss, Explain, Generalize, Give examples, Identify, Illustrate, Interpret, Paraphrase, Predict, Report, Restate, Review, Summarize, Tell</td>
</tr>
<tr>
<td>Application</td>
<td>Articulate, Apply, Change, Chart, Choose, Compute, Construct, Demonstrate, Develop, Dramatize, Extend, Instruct, Interview, Prepare, Produce, Relate, Select, Show, Solve, Transfer, Use</td>
</tr>
<tr>
<td>Analysis</td>
<td>Analyze, Characterize, Classify, Compare, Contrast, Debate, Deduce, Diagram, Differentiate, Discriminate, Distinguish, Examine, Focus, Outline, Relate, Research, Separate</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Compile, Compose, Construct, Create, Design, Develop, Formulate, Integrate, Invent, Make, Organize, Perform, Plan, Produce, Propose, Rewrite</td>
</tr>
<tr>
<td>Evaluate</td>
<td>Argue, Assess, Choose, Compare and Contrast, Conclude, Criticize, Decide, Defend, Evaluate, Interpret, Judge, Justify, Predict, Prioritize, Prove, Rank, Rate, Select, Support</td>
</tr>
</tbody>
</table>

Although all question types are useful, one study showed that when peers were trained to ask each other higher level questions (those requiring comprehension, application, and synthesis), they performed better on exams than groups that did not have any guidance on asking higher level questions (King, 1990).

As with other ways of categorizing questions, some questions may not easily fit into one category. Knowing the different categories, however, can help you ask a variety of effective questions.

**Exercise 5.2: Categorizing Questions**

1. List ten questions you have asked or might ask during a tutoring session.

2. Categorize these question in as many ways as possible.

Compare your questions and answers with a partner’s.
**Socratic Questioning**

Tutors often use Socratic questioning to lead a student through a problem (Lepper et al., 1997). Socratic questioning is a methodical process in which the questions build on each other to lead the student to the answer. It is useful because it guides the student while building on his or her ideas instead of lecturing.

Here are some examples:

Q1: What’s the difference between this and that?
Q2: So why can’t it add here?

Q1: What does it tell you?
Q2: So what’s your other method?

Q1: Tell me about the verb. When is it taking place?
Q2: Is it something that’s started in the past and continues or something that took place one specific time?
Q3: So what verb form do you want there?

**5.3. Prompting**

Another tool you can use to get students thinking and verbalizing is to **prompt** them.

- Summarize the main ideas of what we have covered.
- Draw the graph for this function.
- Explain Gauss’s law.

These kinds of questions get students involved and often require them to talk or work for a longer period of time. In that way, they are similar to open-ended questions.

**5.4. Redirection**

Sometimes students will ask you questions. It is very tempting to give the answer immediately, but then you become a lecturer. Instead, ask yourself whether it is appropriate to redirect the question back to the student.

Sometimes the redirection is posing the same question to the student:

S: Can I just multiply both sides by 2x?
T: What do you think? (Redirection)

Sometimes, however, you might begin by asking another type of question that simplifies the problem a little bit.

S: How do I translate this sentence? (Application-level question)
T: Well, where is the sentence’s verb? (Redirection at the comprehension level; it also could be the beginning of a series of Socratic questions)
Redirecting allows you to continue to use indirect techniques while still helping the student answer the question.

5.5. Questioning Skills

Of course, asking good questions is not enough. You also want to ask them in an effective way and listen appropriately.

Nonverbal Signals

Nonverbal signals are communications that happen without words. They can replace, reinforce, or contradict a verbal message (Tubbs & Moss, 2007). Think of asking someone how he is doing. If he smiles, makes eye contact, has good posture, and says “Fine,” it is likely that you will believe him. If he is slouched, pouting, and says “fine” in a brisk or sarcastic way, you may believe that something is not okay.

There are multiple types of nonverbal communication, many of which are culturally based. While a smile is universal, many others like gestures and eye contact are not.

- **Body movement/kinesthetics** includes posture, body orientation, shoulder movements, and hand gestures.
- **Facial expressions** includes movements made by mouth, nose, and brows.
- **Eye contact/eye avoidance.**
- **Touch/haptics.** This is based both on rituals (handshakes) and emotions (lightly touching one’s arm while speaking).
- **Paralanguage** is the manner in which you say something, rather than the words you say. It is the rate, volume, and rhythm of speech. For instance, “I want to go to the movies tonight” could be said in multiple ways:
  - I want to go to the movies tonight (but Jane doesn’t).
  - I want to go to the movies tonight (not the party).
  - I want to go to the movies tonight (not wait until tomorrow).
- **Silence** always serves some function, whether allowing the speaker time to think or signaling an emotion.

Paying attention to nonverbal signals is very important in tutoring. If you ask a question such as “Do you understand?” the student may say “yes,” but his nonverbal signals could suggest otherwise. For this reason, it is often better to ask an open-ended question, such as “Why did that solution work?” if you really want to test understanding.
Also, pay attention to your own nonverbal signals. A student is less likely to verbalize if you look bored or preoccupied.

**Active Listening**

Another way of getting a student to verbalize is to actively listen. Active listening is more than just hearing or even responding; it is responding in a specific way.

**Exercise 5.3: Responding to Students**

Consider a student who says the following: “I studied a whole week for this test and I still just got a C.” How would you respond? Compare your responses to other tutors.

Let’s look at some common responses:

a. “Well it’s a hard course; lots of people got C’s.”
b. “Don’t worry; you’ll do better next time.”
c. “Well, I guess you should have studied more.”
d. “You should be pleased with a C. I saw another student who got a D.”

Although all of these responses are well intentioned, they dismiss the frustration the student is feeling. By sharing another student’s grade, whether named or not, response d crosses an ethical line.

Hearing such responses is unlikely to make the student feel any better and is unlikely to cause a change in behavior. A better response would be to practice active listening, which is responding to a speaker by reflecting back what you think the speaker meant. This includes both the content of the message and the emotions behind it.

An active listener might respond to the student by saying, “You sound really frustrated about the grade you got on this test, which you studied so hard for.”

Actively listening in such a way does many things (DeVito, 1998).

- It shows that you heard the speaker, often the most important part of listening.
- You are able to check your understanding. Sometimes when we actively listen, we realize that we did not fully understand what the speaker was saying.
- It validates the speaker’s feelings. It simply says that those feelings exist.
- It prompts the speaker to continue speaking. Judging, fixing, or diminishing the speaker can make someone shut down.

There are three main ways to actively listen.

- Reflect the content of the speaker’s message. With the foregoing example, a statement such as “So you didn’t do as well as you would have liked” reflects the content of the message.
- Reflect the feelings behind the speaker’s message. “You seem upset” reflects the feelings.
Ask questions. “What do you think happened?” not only avoids criticism but is also one way to get the student thinking about why he or she earned that grade.

Active listening is not just for when students are showing strong emotions. Paraphrasing a student’s explanation of a concept can help solidify his or her knowledge.

**Wait Time**

It seems odd, but some of the hardest work you do as a tutor may be doing nothing at all. Giving your student time to work on a problem and discover his or her difficulty, giving your student time to think after you ask a question, and simply letting a student complete his or her thought (even if it is not perfect) are all hard skills for many tutors to learn.

- **Wait for students to develop their questions.** Often as tutors, we know what questions students typically have, but just because other students have asked a question does not mean that *this* particular student has that question. Let the student have time to assess her needs and ask *her* question. Forming a question is itself an act of learning.

- **Wait for a student's response after asking a question.** You have probably seen teachers, salespeople, and others who ask a question and then immediately respond themselves. A good rule of thumb is to wait at least five seconds after asking the question before rephrasing it or giving a hint. That time may extend, however, especially when you are asking harder questions like open-ended ones and those that require application.

  Increasing wait time can increase academic achievement (Tobin, 1980). Though it may not seem productive, waiting can be very important. In one study of experts and novices, the experts took longer to complete an organizational task (Chi et al., 1981). This was not because they did not know the material as well, but because they were thinking deeply about the task. Interrupting would be detrimental.

- **Do not interrupt the student.** The student’s ideas, whether correct or incorrect, need to be verbalized. The correct ones increase the student’s ownership, and the incorrect ones allow you to see specifically where to address difficulties.

- **Waiting after a student stops talking.** How long you wait after a student finishes giving a response is another type of wait time that can facilitate verbalization. By not immediately agreeing with a statement, correcting an error, or moving to the next step, students have time to evaluate what they just said and may come to a critical understanding.

  In one study, an Anglo teacher assumed that Navajo students’ responses were completed, when really it was just a pause. When taught by a Navajo teacher who waited much longer than the Anglo teacher, the students participated twice as frequently (Tharp, 1989).
Exercise 5.4: Increasing Wait Time

Two seconds of silence (much less five or ten) can feel like an eternity when you are tutoring. Practice asking questions with two other tutors. Take turns in the following roles.

The Questioner: Try asking difficult questions that the student must think through before answering.

The Respondent: Do your best to answer the questions fully.

The Observer: Time how long the questioner waits for a response.

Reflection: As the Questioner, did you wait as long as you thought you did? What were you thinking while waiting for the Respondent to answer?

Paying attention to nonverbal signals will help significantly when deciding on how long to wait. Does the student seem engaged? Frustrated? Hopeful? The answers to these questions can help you decide whether to rephrase a question, give a hint, or continue waiting.

5.6. Conclusion

Getting the students to talk is the tutor’s most useful tool. Only then can the tutor understand where the student’s difficulty lies. The many different classification systems in this chapter (topic, open vs. closed, and Bloom’s taxonomy) are tools to help you ask a variety of questions. Paying attention to what kinds of questions you ask can help you avoid getting stuck asking the ineffective questions.

When you get students to verbalize, however, be sure to listen carefully. Be a mindful listener who pays attention to all nonverbal signals and leaves plenty of wait time.
6. Giving Feedback

Rebecca, a tutor who has worked in a variety of different programs, has seen the benefits of giving positive feedback in all of them. “I didn’t notice this until I was supervised,” she says, “but it took a while for me to realize the importance of positive feedback and the importance of using students’ names to show you recognize that they are there. I’m used to saying ‘Good job’ and ‘Mm Hmm.’ I’ve gotten better at saying ‘that’s good, but try it a slightly different way’ to show I recognize that the student understands one part and we can now move onto the next part. It wasn’t something that I recognized until I got feedback. Now I make sure I’m using their names, smiling, making eye contact.” Rebecca’s work on positive reinforcement is paying off. “I notice now that my students are more likely to try something; they’re more likely to admit what they don’t know, but still participate.”

Some theorists argue that tutoring is effective because it keeps students from getting too far off track (Merrill, Reiser, Merrill, & Trafton, 1995). We help students stay on track by giving them feedback about both what they have learned and how they are learning. The next two sections will look at ways to give students positive feedback and constructive criticism.

6.1. Positive Reinforcement

Positive feedback (or positive reinforcement) is any response to a behavior that increases the frequency of that behavior (Skinner, 1968). It can be a very powerful tool in tutoring relationships because:

- Positive reinforcement can increase the time a student is willing to spend on a difficult task (Cameron & Pierce, 1994).
- It can increase a student’s sense of self worth (Dweck, 2007).
- It helps students develop the courage to be imperfect and the willingness to try (Dweck, 2007).
It is such a powerful tool that in multiple studies it has a larger effect on student learning than even the quality of a teacher’s instruction (Walberg, 1984; Wang, Haertel, & Walberg, 1993).

**Types of Positive Reinforcement**

There are multiple ways to give positive reinforcement (Bellucci, 1972).

- **Verbal positive reinforcement** is probably what you think about first. Saying “Right,” “Good job,” or “Excellent” are all ways to positively reinforce a student with words. It often helps to vary the verbal reinforcement instead of saying the same thing over and over again.

- **Nonverbal positive reinforcement** uses the nonverbal signals discussed in Chapter 5 to encourage a student. Nodding your head and smiling are both ways to let the student know he or she has done something correctly.

- **Qualified positive reinforcement** praises the part of a student’s response that you want to encourage while acknowledging parts that need improvement. For instance:

  Tutor: John, how is yellow fever transmitted?
  John: I think it is transmitted by flies.
  Tutor: You’re right; it’s an insect that carries the disease, but it isn’t a fly.

  Tutor: Describe the reduction half-reaction in the galvanic cell.
  Maria: Reduction is when electrons are lost at the cathode.
  Tutor: Reduction does occur at the cathode; but are electrons lost or gained?

- **Delayed positive reinforcement** occurs when the tutor emphasizes the positive aspects of a response that occurred earlier in time. This could be as recently as a couple of minutes ago to previous sessions.

  For example, the chemistry tutor recalls that earlier in the tutoring session, Maria had correctly explained the difference between ionic and covalent bonds. Now Maria is confused about writing ionic equations. The tutor begins by saying, “You told me earlier that ions remained apart in solution.”

**Exercise 6.1: Identifying Types of Positive Reinforcement**

Identify the following tutor statements as verbal (V), nonverbal (N), qualified (Q), delayed (D), or not reinforcing (NR).

_____ 1. “I can tell you’ve really been studying this material.”

_____ 2. “That was a good question.”

_____ 3. “You got the one-half part right; what comes next?”

_____ 4. “That answer has nothing to do with our discussion.”
5. “A little while ago you said that molarity was moles per liter. How can you get the number of moles if you know the molarity?”

6. “Uh hmm.”

**Using Positive Reinforcement**

Studies increasingly show that positive reinforcement has limitations. One important factor is whether the praise is about the person or the process. Person praise is about the student, such as “You’re so smart” and “Wow, you are a math genius”; process praise is about the behavior a student engages in, such as “You’re really working hard” or “You’re using so many strategies that are useful in this class.”

Dweck (2007) shows that praise for a person has the effect of creating a view of intelligence that is “fixed” (meaning you either have it or you don’t). This can be dangerous because it does not encourage students (both high achieving and low achieving) to work hard. It can also cause students to avoid challenging situations because “if success means you’re smart, then struggling means you’re not.”

Process praise encourages a view of intelligence that it is something that can grow. Students with growth mindset are more likely to take on challenging tasks because they understand that the brain needs challenges to become smarter. Just as weightlifting increases your muscle strength, solving challenging problems increases your intelligence.

**Exercise 6.2: Changing Person Praise to Process Praise**

Change the following person praise statements to process praise.

- “You got a B on the test? You must be so smart!”
- “You take such good notes.”
- “It’s great you finished your homework in thirty minutes.”

No matter what type, positive reinforcement can be overused. Students may become dependent on reinforcement; using reinforcement intermittently and slowly reducing the amount of it can help avoid the dependency (Skinner, 1968). In one study, students who were used to getting immediate positive reinforcement assumed they made an error if the tutors delayed even a second (Merrill et al., 1992). Because you will not always be sitting next to students while they are solving problems, it is important for them to learn how to recognize their own errors. According to one study, “students were more likely to learn a rule if they made an error and recognized that they made an error” (Chi et al., 2001). If you are constantly evaluating their work for them, students will not learn how to judge their own work.

So how do you know when to use positive reinforcement? As with many tutoring skills, a lot of it is practice, but here are some guidelines.
If the student appears to be frustrated, it is probably a good time to use positive reinforcement. Something like “This material is really difficult, but you’re getting a little further with each problem” can help motivate the student to continue trying.

If you are working on material that you know the student knows how to do, ease up on the positive reinforcement. Saying something like, “I think you can finish the problem now. I’ll look at it when you have your final answer” lets the student know you will be removing the positive reinforcement for a while and he or she will have to judge each step. Conversely, if the material is very new, you may want to give more consistent positive reinforcement.

If the student is looking at you after every step, you probably need to back off. Students will often ask you “Is this right?” but redirect the question back to them: “What do you think?”

You can also help build independence and make sure the student truly understands material by asking follow-up questions. When a student gives you a correct response to a question, do not just nod your head, but ask “Why?” or “How do you know?”

6.2. Dealing with Tutoring Problems

You probably signed up to be a tutor to help students with academic content problems, but there will be times when other issues come up.

Exercise 6.3: Tutoring Problems

What are some tutoring problems you have experienced? How did you handle it? Was it successful?

As with many things in tutoring, balance is key when responding to a problem. On one hand, we do not want to be so passive that problems continue; on the other hand, we do not want to be so aggressive that we scare students away. Instead, we want to be assertive.

Assertiveness vs. Passivity vs. Aggressiveness

Assertiveness is standing up for your rights, expressing your feelings and beliefs directly and honestly while respecting the rights and feelings of others (Wilson & Gallois, 1993). Certain behaviors occupy various points on an assertiveness continuum, ranging from passivity and submissiveness to aggressiveness and hostility.
Ames and Flynn (2007) look at the drawbacks of having too much or too little assertiveness.

People with low assertiveness (passive) often avoid confrontation, usually for fear of offending others. People may like them, but problems are often not resolved.

Moderately assertive people are able to demonstrate both fairness and strength. They can stand up for their rights, but remain sensitive to the rights of others. It is the most productive of the three types.

Someone who is highly assertive (aggressive) often comes off as intrusive. Though this may get results in the short term, others often avoid highly assertive people. Like low assertive people, therefore, problems are often not resolved.

Exercise 6.4: Assertiveness

Where do you think you fall on the continuum? Does it change depending on the situation?

Think of some specific times when you were over- or under-assertive. How could you respond differently?

Whose Problem Is It?

Before you attempt to solve a problem, you first have to identify who owns it and, therefore, who can fix it. Whose problem is it that your student is late? Did not study? Wants you to cross ethical lines?

This is not a trick question, and the answer is often “it depends.” If a student comes late, you may be able to say it is the student’s problem. He will not be able to receive a full session’s worth of tutoring, and he may also have to deal with consequences from the tutorial center’s policy.

If a student regularly comes late and you feel frustrated, then it is your problem as well. Your response should change depending on who owns the problem. Figure is a flow chart to help you decide. We will go through each response in turn.

- Student’s problem: Emotional content

  If there is emotional content in the message, use the active listening skills described in Chapter 5. This is useful because it not only validates the student’s feelings but also keeps the ownership of those feelings with the student, where it belongs.

  Of course, if the student seems to be unusually frustrated, angry, or depressed, do not attempt to take on a role that you are not trained to take on. Refer the student to a trusted advisor, counselor, family member, or friend. Something as simple as “Wow, you seem to have a lot going on right now; is there someone you can talk to?” is an easy way to refer the student. It is good to know about your institution’s resources such as counseling centers so that you can offer additional resources.

- Student’s problem: Process or course content

  Process and course content problems are common in the tutorial center. Use the indirect and direct tutoring techniques to help students learn.
Figure 6.1. Tutoring Problems and Appropriate Tutor Responses

- **Tutoring Situation**
- **Monitor Situation**
  - Whose problem is it?
  - Tutor
  - What kind of problem?
  - Student
  - Is I-message appropriate?
    - Yes
    - “I feel ___ when you ____.”
    - No
      - Emotional Content
        - Use Active Listening
      - Process or Course Content
        - Use Indirect and Direct Tutoring Techniques
      - Study Habit or Behavior
        - Use Escalating Assertions
Student’s problem: Study habit or behavior

When the student is exhibiting a behavior that is causing problems, it is best to specifically and clearly address the issue. Hoping the issue will resolve itself will not help. If the issue repeats itself (either during one session or over multiple sessions), escalate your assertions (see next section).

Tutor’s problem: I-message appropriate

If the student’s behavior is bothering you, it may be appropriate to let the student know. When doing so, we often use what is called an I-message. Instead of saying, “You’re always late,” you rephrase it in terms of I, such as “I’m frustrated when you don’t arrive on time.” You maintain ownership of your feelings and point to the specific behavior that is causing it.

Tutor’s problem: I-message is not appropriate

There will be times when the problem is yours but an I-message is not appropriate. For instance, perhaps you are worried about an upcoming test of your own, you are tired because you did not get much sleep last night, and maybe you have not had time to eat a normal meal. These are your problems, and your main goal is to not let it affect your tutoring session. You should monitor the situation by paying attention to your feelings and the student’s behavior.

When offering criticism or using I-messages, there are some important things to keep in mind (DeVito, 1998):

- Speak with confidence. Use confident posture and look people in the eye. Avoid qualifying words like “sort of” and “maybe.”
- Get to the point. Instead of hedging around a topic, communicate what you need to communicate.
- Use I-messages to avoid blame.
- Stick with the facts of a situation; do not exaggerate.
- Listen to the other person; do not assume you know his or her motivations, thoughts, and feelings.
- As with positive reinforcement, critique the behavior, not the person.

By using these strategies, you will be able to be assertive without being aggressive or passive.
Escalating Assertions

One of the nice things about being assertive is that problems are handled when they begin. Sometimes, however, a simple assertion is not enough. That is when escalating assertions are appropriate.

**Problem:** Tutee is not coming prepared.

First response:

“If you attempt to do your homework before our session, we can make better use of the time we have together."

*Or*

“I realize that it’s difficult to get everything done when you’re a busy student, but I think you will need to put in more hours of study time to get the grade you want.”

Both of these statements are clear, process-oriented criticism. The tutor is not frustrated, so it is the student’s problem and an I-message is not appropriate.

If the student changes the behavior, use positive reinforcement to show your appreciation. If the behavior does not change, escalating your assertion is appropriate. It helps to know your center’s policies about this issue.

Second response (student’s problem):

“According to the center’s policies, you are to come prepared to the sessions. This includes having attempted your homework. If you don’t come prepared next time, you will lose your tutoring privileges.”

Second response (tutor’s problem):

“I feel frustrated when you don’t prepare because I don’t know how to help you succeed. According to the center’s policies, you are to come prepared to the sessions. This includes having attempted your homework. If you don’t come prepared next time, you will lose your tutoring privileges.”

**Exercise 6.5: Dealing with Tutoring Problems**

Create your own escalating assertions:

1. When you use indirect techniques, your student says, “Just tell me what to do.”

2. Your student arrives ten to fifteen minutes late.

3. Other tutoring situations you have encountered.
Would you actually use these responses? What do you think would happen if you did? What if you did not?

6.3. Conclusion

Whether trying to encourage a student to continue a behavior or to stop another, feedback is most effective when it is about the process a student is using, not the student him- or herself. Learning how to give effective feedback is one of the most useful skills you can develop as a tutor, and it is also one of the hardest.

Each semester, senior tutors tell new tutors important things they have learned. Two constant themes are praise students when you can, and be assertive early in a tutoring problem. Most new tutors incorporate the first method into their practice early, but the second technique takes more time to develop. Just as I encourage you to offer process praise and criticism, I remind tutors that tutoring is a process. Reflecting on our process and receiving feedback are two ways we can improve it.

But I’m only thirty minutes late

Middle America considers on time to arrive no more than 5 minutes before or after. Other cultures consider it polite to arrive up to thirty minutes early, which can be quite surprising for someone hosting a party. Some cultures don’t consider a person late who arrives 30 minutes (or more) after the scheduled time (Dresser, 1996).

So how do we as tutors negotiate this? Neither approach to time is better than the other, but using different time standards can be frustrating for both tutor and student. It’s best to be clear about expectations: “The center requires you be on time for your sessions. Anything after five minutes is considered late and will result in a penalty.”

This statement does not judge the other person’s use of time, but does make it clear what the culture (of this specific center) expects. Making cultural expectations clear means it is easier to adapt to them.
7. Developing Good Study Skills

For many tutors, working on content is their primary goal; helping students develop study skills may be an afterthought. Jon, a physics tutor, had tutored informally before, but only after some training did he see the value in study skills. “It helps students out a lot; it helps them become good learners in general, not just for this problem. One student I worked with had these notes that were just awful to try and read. It was for physics, and there are lots of fundamental equations that he would need access to. But his were just buried in his notes among any examples his professor may have done. I suggested that we create a reference sheet with the most important parts. He ended up doing that, and in the future, when we were working on homework and tests, he was able to quickly find what he needed.”

All college students have had academic successes, but some find it difficult to make the transition to college. If a student found high school easy, he or she may not have needed to develop study skills that are useful in college.

For instance, some college students

- Do not know their textbook has an index, or have never used it.
- Think studying their notes means skimming over them and not attempting the problems themselves.
- Regularly go into exams feeling prepared but perform poorly.
- Never take notes in class.
- Have never studied more than two or three hours for a test.
As a tutor, you are in a unique position to help students develop skills that will serve them throughout their college career and beyond. Sometimes, however, you may feel a tension between the short-term and long-term goals of tutoring.

7.1. Short-Term and Long-Term Goals of Tutoring

Many students take advantage tutoring because they are worried about a specific test or even a particular homework assignment. These are all short-term goals of tutoring.

Long-term goals of tutoring include mastering the material and becoming an independent learner who is able to identify what needs to be learned and how to learn it. Independent learners are then able to follow through with a plan to succeed. These long-term goals are best promoted by using the lowest structure possible for that student.

When students need more guidance, it is easy to fall into the trap of doing more of the “thinking work” for them. Instead, you need to be confident—before beginning a tutoring session—that your long-term goal for the student is ultimately more important than any short-term goal. Keeping this in mind will remind you to focus on developing the tutee’s study skills and consistently use indirect tutoring techniques.

Promoting study skills is one way of working toward the long-term goal of being an independent learner, while still helping students reach their short-term goals. Before we talk about how to help students develop good study skills, though, let’s talk about your own for a moment.

Exercise 7.1: My Study Skills

Think about how you study.

1. Do you have a calendar? Does your calendar list major assignments? Weekly work?

2. Are your notes dated? In order? Clear? Do you review your notes after class? Do you take notes?

3. Do you read the textbook? Put the material into your own words?

4. Do you complete practice problems before a test? Without looking at any materials?

5. How do you memorize what you need to know?

6. Do you discuss material with peers?

Compare your answers with other tutors. Is there anything surprising?
One of the things that consistently surprises me is how some students who do well have what are considered “poor” study skills. One tutor, Kyle, who was consistently prepared and engaged in class, once told me his adage was: “If you wait until the last minute to do something, it only takes one minute to get it done.” Because I need a lot of time preparing, I was in awe of how he could produce such top-quality work in so little time.

The point of this story is not that I now wait until the last minute to use time more efficiently, but instead that I recognize that different paths work for different people. The important thing is that they work. Some students do not keep a calendar but are able to keep up with assignments. Some students can retain information without taking notes. Some, however, will need assistance developing skills because their current ones are not working. Your role as a tutor is not to replace students’ resources, but to direct students to them and help them learn how to use these resources effectively.

If students are not being successful, then their study habits must change. This may require using resources they have never used or performing tasks they have never performed. As such, it may not be a natural process, and this is where you can be most effective in helping students become independent. Kyle, who is successful without spending much time on a course, will find a course in the future that is challenging. He will have to adjust his study skills to meet the course demands. A tutor can help him make adjustments.

Next, we look at different study skills and how you can help students with them.

### 7.2. Goal Setting

Goals are not dreams, wishes, or illusions. They are specific results worth achieving. Edwin Locke and Gary Latham (2002) point out that goals help students succeed in many ways:

- They draw attention and effort toward the things needed to be done to reach the goal.
- They motivate people to stick with a task. In fact, the higher the goal, the more energy someone is willing to put into achieving it.
- Goals increase performance by forcing focus on the behaviors necessary to reach the task.

Certain goals, however, are far more likely to improve effort than others. Specific goals are more likely to elicit effort than vague goals like “Do your best”; making a public commitment (even just to one other person like a tutor) enhances one’s commitment to it, and thus makes it more likely to be achieved (Locke & Latham, 2002).

While the source of the acronym is unknown, many people find SMART goals useful.

SMART goals are specific, measurable, attainable, relevant, and time-bound.

- **Specific** goals are those that are clearly defined. Who? What? When? Where? For instance, “I will be healthier” is not specific, whereas “I will work out three days a week and eat at least seven servings of fruits and vegetables a day” is specific.
Measurable goals are those that are clear whether they have met. While “healthier” contains a range of behaviors, working out three days a week is very measurable. We can tell if that goal has been met or not.

Attainable goals can be met. Unrealistic goals often reduce the amount of effort one offers. For instance, I am not going to be a pro basketball player. If I were to set that as a goal, I would probably not work hard for it. But if I set my goal to consistently make 60 percent of my attempts at a basket from the three-point line, that is attainable. Do not set goals too low, though. That will also decrease effort because it is too easy (Locke & Latham, 1990).

Relevant goals are more likely to make people motivated as well. Not only is being a pro basketball player unattainable for me, it is also irrelevant to my needs and desires at this point in my life. The goal of completing a statistics course, however, is relevant to my current position, thus I am more likely to work toward it.

Time-Bound goals have a set date at which they will be completed. Sometimes those dates are set for us, such as an exam date or graduation day. When there is no defined date, though, it is useful for us to create our own (specific and attainable) deadline. This date motivates us to get moving toward a goal. Even when there is a clear due date for a large project, like a final paper, it is useful to break the tasks down into many small segments with earlier due dates (such as preliminary research will be done by X, outline by Y, and so on).

7.3. Time Management

Students are constantly faced with deadlines. Different individuals can handle deadlines differently and still be successful. Some are motivated by deadlines and perform much more efficiently and produce better quality work when a deadline is very near. Others handle deadlines far in advance, planning carefully so that the work is completed well ahead of time. It is important to remember that if a student is successfully handling deadlines, even if that method is different than yours, do not impose a new time management strategy on him or her.

John Carroll (1989) cites three variables related to time that affect student performance. They are aptitude, which encompasses variables that affect the time required to learn given material; opportunity to learn, or available time; and perseverance, or the amount of time a student is willing to spend learning. Carroll deduces that actual time spent learning is limited by each of these variables and that the time spent is less than or equal to the shortest of the three (see Figure 7.1).

Figure 7.1. Carroll’s Time Variables
Students often seek tutoring assistance in a subject that is difficult for them. Therefore, we might say that the aptitude, or the time required to learn the material, is significantly higher than it may be for other courses.

Determining the amount of time a student has available can be easily visualized by doing a weekly schedule, such as Exercise 1.2. This will provide a visual for which days will be particularly demanding for the student. It can also be useful to plan out a semester schedule. Use course syllabi to list test dates and due dates for papers, homework assignments, and so on. This will help the student see if there are particular days or weeks that will be very demanding.

Figuring out the perseverance can be more difficult, however. Three sequential processes developed by Britton and Glynn (1989) can help determine perseverance: setting goals, identifying tasks required to accomplish those goals, and approximating the amount of time each task requires.

It is important for a tutor to understand why a student is seeking tutoring for a particular course. Perhaps it is to get an A, to understand the material fully, or simply pass the class. Once the student has stated her goal, she must identify the daily and weekly tasks necessary to achieve it. These may include (but are not limited to) reading assigned material, reviewing class notes, meeting with study groups, attending office hours, completing homework assignments, and working additional practice exercises. Note that these are in addition to attending class and tutoring appointments. You, the tutor, should then help the student approximate how much time each activity will require to successfully attain her goal. Gauge how well these goals are being met after a test or other major assignment. You may find that you and the student have misjudged the amount of time the student needs to be spending on the class.

Exercise 7.2: Setting Goals Effectively

The following steps can help you and your students set useful, attainable goals. Complete the first four steps now.

1. Create a SMART goal.
2. Identify what tasks will need to be completed to successfully complete the goal.
3. Estimate the approximate time needed to complete the tasks.
4. Compare the time needed to the available time. Is success possible? If not, what sacrifices will need to be made to make time available? Are those sacrifices worth it?
5. Start working toward the goal with a positive attitude. Visualize accomplishing the goal. Visualization is a useful technique that people use because it can become a self-fulfilling prophecy.
6. Monitor progress. Is the goal being met in a reasonable amount of time? Are there other resources which can be used to help reach the goal?
Each student, after figuring out the time required to be successful, must decide (1) whether she has that much time available (opportunity to learn), (2) if it is worth it to her (perseverance), and (3) what she will give up, if necessary. For many students, fully understanding organic chemistry would take twenty hours a week. That, along with other courses, may mean that some extracurricular activities will have to be cut. Or it may mean that the student chooses to take the course another semester. Though you are not an advisor or a counselor, planning out how much time the course will take can help illuminate the issues the student should discuss with an advisor, instructor, or other mentor.

If you are in a term-long semester assignment, we recommend discussing this at the beginning of a tutoring relationship and following up frequently. If you are working with a student only once or twice, the principles can still be useful.

Even when a student has decided to work diligently in a course and has carved out time for studying, he may be able to study more effectively by improving his study space, using written resources, memorizing material, and preparing for tests.

### 7.4. Finding a Space to Study

How many times have you sat down to study and an hour later not be able to describe what you have accomplished? Lack of concentration or productivity can be caused by numerous factors, many of which might be related to your study location.

**Exercise 7.3: Study Space**

Describe your ideal study environment. What does it look like? Who is present? Lighting? Sound level? Materials at hand?

Is your ideal study environment similar to that of other tutors?

The students you work with may not have found or created a location that is conducive to learning. Factors to consider and discuss with your students include, but are not limited to:

- Amount of traffic
- Amount and type of noise
- Temperature
- Lighting
- Available resources
- Accessibility

As with other study skills, never assume that the process of selecting an appropriate study space is natural or easy for your students. A simple discussion about the topic and following up with the student may significantly increase productivity!
7.5. Written Resources

Notes

It seems like such a simple task: write down the important information you hear. But this deceptively simple job can cause problems. Some students write down little information, whereas others try to write down everything and lose focus on the most important information. Even when students take good notes, many do not review them regularly. Some never review their notes at all, even though reviewing notes is actually more valuable than taking notes (Williams & Eggert, 2002).

One good way to assess a student’s learning and note-taking skills is by starting the tutoring session by having the student explain what was recently covered in class. The student can use notes as a guide for remembering the concepts.

If the student is not able to recall what happened in class a few days ago, have a discussion about the importance of taking notes. Why is the student not taking notes? How does he or she expect to remember important information from classes? Many students stop taking notes when they are confused. What could the student do instead of tuning out? How could the student take notes in a way that would be meaningful two weeks later? In general, if a student believes that note taking is not important, challenge that opinion!

After the discussion, turn to another resource such as a textbook to jog the student’s memory. Do not simply start explaining the material to the student because that will not encourage him or her to take better notes in the future. If you are in a term-long assignment, hold the student accountable for improving his or her note-taking ability by following the assertiveness guidelines in Chapter 6 and following the tutorial center’s procedures.

If the student takes copious notes but includes unimportant information, walk through the notes with the student and explain how you know which information is important. The ability to sift through information is an important skill that experts have.

Reviewing notes together is also useful because the person who created the lecture on which the notes are based (i.e., the professor) is also most likely the person who will be writing the test. This is an important correlation that can give you an idea of what the instructor expects students to know.

Other things to do with notes:

- Spend time during the session discussing difficult topics in notes.
- Rework problems from notes without using the solution.
- Highlight important definitions, concepts, formulas, etc.
- Have the student take notes during the session.
Textbooks

A survey at two different universities found that a large majority of students spend less than three hours each week reading textbooks, and less than 20 percent begin reading more than one week prior to an exam (Sikorski et al., 2002). Moreover, research suggests that textbook reading by college students is declining. Burchfield and Sappington (2000) report that from 1981 to 1997 there was a significant decline in the number of students who completed reading assignments in psychology courses; the number of students who read was especially low in introductory courses.

Some students believe the textbook is inferior to other sources, such as class notes (Clump, Bauer, & Bradley, 2004). This is understandable, as many high school classrooms do not require reading textbooks; instead, pertinent information is often extracted by the teacher and the textbook is used only for example problems and charts and tables. College classrooms may or may not operate with this structure. Some instructors assign reading that is supplemental to information presented in class. Other reading assignments may complement lecture material. The amount of this information that is tested varies by department and instructor. Because it is not always clear how much the textbook will be used, it is best for students to get comfortable using the textbook and the tools it offers.

Most textbooks are not novels. They do not have to be read in a linear fashion, and they have features that can aid in studying that some students have not yet found. When using these features, be certain to have the student use them; do not use them for the student. Certain features are:

- **Table of contents and/or index**: Some students will search without direction and never find the topic they seek.

- **Bold/highlighted text**: These emphasize important concepts, vocabulary, and formulas. They also may emphasize typical places that students get confused.

- **Chapter summaries**: Synopses may be a good place to start when helping the student make a study plan or review for an exam. They can also be compared with class notes to see what material is covered in which place(s).

- **Glossary**: Refer students to the glossary when they are unsure of a vocabulary word. Have them keep a running list of words they reference during the session.

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**Hyper-highlighter**

Have you ever checked out a library book and noticed that every word is underlined? Or looked at someone’s notes and everything is highlighted? I like to call this tendency “Hyper Highlighting,” and it can cause problems. Some students highlight excessively when they read because they feel like they are getting something accomplished, but it defeats the purpose of highlighting. When everything is highlighted, you cannot distinguish what is most important.

If a student continues to highlight excessively, the student should make “summary pages” of the important information.
- **Practice exercises:** Although it is helpful for students to work extra practice problems and exercises, it is even more important that they learn to select these problems. Go through the exercises and discuss why you would select certain ones. As you progress through the session (or through multiple sessions) with the student, allow him or her to do more and more of this alone. Comparing and contrasting problems are essential; be specific when asking what some problems have in common and what makes certain problems more difficult.

**Avoiding the Illusion of Knowing**

What does it mean to “go over” notes or a textbook? Some students will say they reviewed their notes, but when asked simply to recall information in their notes or solve a problem from their notes, they cannot. This tendency to incorrectly assess understanding is called the “illusion of knowing” (Glenberg & Epstein, 1985). Students can avoid this by doing two things: summarizing and self-questioning (King 1992).

- **Summarizing**
  - Have the student put the notes or textbook material in his or her own words.
  - Write notes down in an organized manner.
  - Save notes in a safe place.
  - Have him or her write down questions for the instructor in the margins or on another sheet of paper.
  - If the student is unable to summarize a topic, this is probably an important topic for discussion during the session.

- **Self-questioning/Self-testing**

  Examples in a textbook or from class notes can be a very dangerous place for students. They may look over them and say, “Yep, I see how they got the answer.” But until the student has demonstrated that she can solve the problem independently, she is at risk for having the illusion of knowing. Instead of just looking at the problem, have the student study the example and then do it herself without looking at the sample. Also, try problems that are similar to the sample, but without looking at the solution for as long as possible.

  Have the student make a practice test from her notes and textbooks. The process of making the practice test challenges a student to identify what will be on the test and how it will be tested. Students can make a practice test by looking at notes and textbook exercises and by making up test questions that are slightly different. Ask the student, “How could the instructor word a question about this on the exam?”
**Overall Use of Written Resources**

When a student asks you a question, it is often easiest to simply answer that question. What’s the speed of light? What’s the imperative form of the verb *poder*? Answer and you are done. While this way may get the student to the correct answer quickly, it also causes dependence on you. You are leading the student to that specific answer, but not to how to answer those questions.

Instead, direct the student to a resource that has the information such as the textbook or his notes. This method equips the student to solve problems and answer other questions outside of the tutoring session. You may be surprised at how many student questions are answered in these simple resources!

With expert learners, direct the student to his resources, but in an open-ended manner. For example, “Where can you find that in your notes?”

For novice learners, you may need to provide more guidance. For example, “I think you can find information about that in Chapter 3. I’ll look in your notes while you find it in the textbook, and then we can compare information.”

When the student finds what he is searching for, instruct the student to write down what was found, and write down where it was found for later reference. I have students create a really-important-stuff-for-me-to-know sheet that is easily accessible. When they ask a question whose answer is on the sheet, I refer them to that. This sheet can also help us summarize what we have covered at the end of the session.

In the ideal tutoring session, the student will come prepared with questions that are not answered in his book or notes because he has exhausted these resources and gotten his other questions answered. Tutoring session time can then be spent on clarifying concepts and understanding, and not on answering simple questions.

By forcing a student to use his resources fully during a session, you encourage that behavior outside of the session. Yes, sometimes it is “forcing” a student to do the work. That is one of the reasons we give you the theory behind tutoring in Chapter 4. Chapter 6 discusses how to be assertive.

### 7.6. Other Resources

While it would be nice for students to be able to find the answers to all their questions in their written resources, that simply is not the case for most courses. Most students will need to make use of their professor’s or teaching assistant’s office hours, drop-in tutorial centers, online resources, or other people or materials. Again, it is preferable for the student to exhaust these resources before meeting with you because these are resources they can use in future classes when a tutor is not available. Your role is to encourage the student to use these resources and for you to follow up with the student if meeting with him again.

“I don’t know the answer to that; ask your professor during office hours tomorrow. Then you can explain it to me the next time we meet.”
Chapter 7

7.7. Memorization

Given a list of random objects, we can only retain 7 items (plus or minus two) in our memory (Bransford et. al, 2000). If we saw everything we were trying to learn as a unique object, we would be in trouble. Luckily, as we learn information, we are able to put them into categories. As those categories develop, we start thinking more and more like an expert (see Chapter 4).

Sometimes, however, we need to hurry that process along and we simply need to memorize information. There are several strategies you and your students can use to make memorization easier.

**Rehearsal:** probably the best known memorization strategy is simply repeating the information over and over again. Saying multiplication tables and singing the alphabet are two examples from childhood. **Flashcards** can provide a tool to aid in the rehearsal. A dry erase board or some other written instrument can also be useful.

**Clustering:** Since we can only remember 7±2 items, it helps to cluster the information into groups. This is one reason that phone numbers are broken into two or three chunks.

**First letters mnemonic:** Using the first letter of a word can significantly shorten the amount of information you need to remember. For instance, using ROY G. BIV for the colors in the rainbow shortens the amount of information to be retained (it is also a good example of clustering information). You can also make sentences out of the first letter. One student remembered the trig functions (Sin = Opposite/Hypotenuse, etc…) using a scene from Snow White: “Some Old Hag, Came Around Here, To Offer Apples.”

**Singing:** Use a song to help remember information. One of my students sang the quadratic equation to the tune of “Row, Row, Row Your Boat” to help her remember it.

Whatever strategy you or your student wants to try, using some of your tutoring session time to get it done makes it more likely that the student will use the skill. So go ahead: practice rehearsing key information at the beginning of a session, make the flashcards, create mnemonic devices.

7.8. Test Preparation/Prediction

A frustrating experience for a tutor is to work with a student for several weeks and for the student to return from an exam or assignment only to say “I thought I was prepared, but I didn’t do well.” Successful students are those who are aware of course expectations, who can predict both the format and content of exams, and who are able to gauge their understanding and persist until they have mastered necessary material.

Many students are overconfident. Glenberg and Epstein (1985) refer to students who do not accurately assess their comprehension as “poorly calibrated.” Baker (1989) writes that “poor calibration seems to be a widespread phenomenon” (p. 33). These students may have been very successful in high school and possibly other college courses with very little effort. They are genuinely surprised when they receive a poor grade because they have never encountered a course before where their traditional methods of studying have not proven effective.
Baker suggests that students need to be encouraged to, and provided opportunities to, self-assess. I further recommend that students be taught how to self-assess, as this is obviously not an innate ability for all learners.

**Making a Study Plan**

- Determine the information the student is required to know. This information may be given in detail by the instructor, or it may be very difficult to identify and may require time and effort for you and the student. Have the student use his syllabus, notes, textbook, homework assignments, and any practice tests to create a list of topics/concepts/main ideas that he expects to be on the test.

- Have him identify several of these topics that are most difficult.

- Elaborate further on these topics. What types of questions does he expect the instructor to ask? During this discussion, ask the student to refer back to his resources to identify different formats the test questions may take. If you are tutoring a problem-based course, do not skip this step! Many students feel overconfident about a certain topic because they can solve one type of problem; however, instructors often change test problems just enough to test for conceptual mastery rather than rote procedure.

- The student should then list the activities he will need to do between now and the test. This may include reworking homework problems, studying notes, visiting office hours or tutorial centers, and studying with classmates.

- Estimate the amount of time each task will take.

- Decide on the days and times he will complete each, taking into account all other commitments.

---

*I got all my homework right!*

Using full practice tests, not just exercises from notes or textbooks, is an important part of preparing for a test. When completing homework, students often know which chapter the problems come from, so they automatically know what concepts and formulas they should use (Bransford et al., 2000).

For instance, I know that when I studied Latin, I could do my homework very easily because I knew what verb form we were working on in class. So, I knew that the exercises were going to emphasize pluperfect tenses, for instance. But when faced with a test covering multiple sections, it was sometimes hard for me to distinguish between the pluperfect and future perfect tenses.

By studying with practice tests (whether student- or teacher-created) the student is tested with the entire material in random order and without any of those clues. Then the student is able to really see if she understands the material.
Using Practice Tests

Use the practice test as a mock test:

- Take the practice test in a timed environment.
- Use only the materials that will be allowed on the actual test.
- Take after the majority of studying has occurred, to accurately assess the student’s preparedness, but with enough time left so that if the results are not favorable, the student can identify areas he still needs to work on and have time to follow through.

Reviewing the Student’s Previous Tests

How does the average student respond when asked, “Why did you do poorly on the exam?” We have found that the most common answers are “I just made stupid mistakes,” “I don’t know,” and “It was too hard.” Students sometimes have a very difficult time identifying specific, content-related reasons for their failure. However, identifying these reasons is essential! Margaret Clifford’s theory of constructive failure argues that more attention needs to be given to identifying the inappropriate methods, approaches or understanding that caused the failure (McCombs, 1988). Here are some things you can do when reviewing old tests:

- Ask about specific questions, “Do you know why you missed this question?” “Can you answer it correctly now?” Do remember that students might answer “Yes” even if they cannot. When a student is unsuccessful at answering a question on an old test, you then have the opportunity to determine what content information was lacking and what caused the student to miss the question.
- Before moving on, the student should be able to state very clearly what he did not understand that caused him to miss the problem.
- Furthermore, he should identify what type of studying would have helped him learn this material, and he should make a plan for how to study for future exams. Where did the material come from? The reading that he did not do? An example worked in class? The answer to this question will help him study more appropriately for the next test.

7.9. Conclusion

In the sections above, there are many study skills that a student can use. You do not have to discuss all of these with all your students, but if a student is not meeting her goals for a course then something needs to change. “I’ll do better on the next test” is not a plan. What is she going to do to ensure success? As a peer, you are in a unique situation to help the student see she is going to need to change something to get a different result.

Asking questions similar to the following can help move her in the right directions.

- First, what happened on the last project/test/etc… that was not the desired result? Was it that she did not understand a concept? Forgot material? Was tested on information she had not studied? Where did that information come from?
How could that have been avoided?

Is the student willing to do what she did not do last time?

When is the student going to do it?
8. Learning Styles

Kaitlin knows she has a clear preference for Intuition, a term you will learn about later in the chapter. She says, “I don’t like having things in steps, and I’m bad at memorizing. I like to look at the big concept first, but most of the students I’ve tutored were not that way. When I tutored calculus, we were studying the comparison test for infinite series. The rule says that if one series converges and is bigger than the other, the other series must converge, too. That rule is all I need to know, but the students I worked with needed more structure. It was frustrating to me at first, but I worked with my supervisor to create a 4 x 4 chart which mapped out what happened if a series converged or diverged and whether it was bigger or smaller than the other series. The students I worked with loved it. As an intuitive type, the chart was actually confusing for me, but it really helped my students with Sensing preferences.”

Exercise 8.1: My Optimum Learning Environment

1. What is your optimum learning environment? Where do you like to study? What is the noise level? The lighting? The time of day?

2. Your answer to question 1 may be “it depends.” This answer is common for a successful student. It reflects your ability to adapt to a situation or type of material.

3. How do you help yourself learn more effectively when you are in a situation that is not your optimum learning environment?

We all have a preferred learning style. You may have taken a class with an instructor all your friends loved but who did not communicate material in the best way for you. The first part of this chapter looks at how you identify your own learning style, and then we consider how we can use that information in our tutoring sessions.
8.1 Identifying Your Learning Style

The *Myers-Briggs Type Indicator®* (MBTI)\(^2\) personality inventory is an internationally used assessment tool. This self-report assessment is based on Carl Jung’s theory of psychological type (Myers-Briggs, 1962). Results are grouped in four different scales that address our preferences. These scales can be used in many different ways, and one important use is to examine learning style preferences. (If you want more information than is presented here, contact CPP at http://cpp.com.)

**Exercise 8.2: Understanding Preference**

Write your name on a piece of paper. Now, put your writing utensil in your other hand and write your name. Could you do it? How did it feel?

Most people are able to write with both hands, but prefer one hand strongly over the other. Writing with the nonpreferred hand is usually awkward and unnatural. Although the writing is legible, it may not be as polished as the preferred hand’s writing.

Likewise, for each of the dichotomies that follow, you are probably able to exhibit characteristics on each side of the dichotomy. While you may behave differently depending on the situation, your preferred type is what you use when in a relaxed environment. The letter beside each attribute is often used as short-hand.

\(^2\) *Myers-Briggs Type Indicator®* and MBTI® are trademarks or registered trademarks of the MBTI Trust, Inc., in the United States and other countries.
Exercise 8.3: Identifying Learning Preference

Consider each of the following scales. Where do you think you fall on each dichotomy?

Table 8.1. Description of MBTI® Preferences

<table>
<thead>
<tr>
<th>Where do you prefer to focus your attention and energy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion (E): Prefers to draw energy from the outside world of people, activities, or things.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How do you prefer to acquire or gather information?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensing (S): Prefers to take in information through the five senses and notices what is here and now.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How do you prefer to make decisions or arrive at conclusions?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thinking (T): Prefers to make decisions on the basis of logic and objective considerations.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How do you prefer to relate to the outer world?</th>
</tr>
</thead>
</table>

(DeTiberio & Hammer, 1993, p. 3)

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8.2. How Do MBTI® Preferences Affect Learning?

So how does this affect our learning? Let’s look at some examples. Consider the following scenarios. What is your reaction to each instructor?

- Dr. Jones teaches physics. Her customary teaching style is to work several related examples in class using a step-by-step approach. Her assigned homework is collected once a week and is very similar to the problems she works in class. Her tests require students to know memorized formulas and
facts. Most test questions bear a clear resemblance to the assigned homework problems. She believes that students will learn according to the pace set by her structured classes.

- Dr. Smith also teaches physics. She gives homework designed to make students use their imaginations and grades it occasionally. She enjoys helping students discover the underlying theory of the concepts. Students are allowed to bring a piece of paper with formulas to the tests. Usually her test questions require students to synthesize and apply several different concepts. Many of her test questions are thought-provoking and some are in essay form. Instead of a midterm, students create a mid-semester project. She prefers to organize her class around common themes instead of following the textbook’s order.

These two scenarios characterize instructors with clear preferences for either Sensing or Intuition, and your reactions probably reflect your own preference for either Sensing or Intuition. Students with a Sensing preference often prefer instructors with a Sensing preference and vice versa. This is just one example of how preference can affect a student’s educational preferences. Table 8.2 shows some others. Next, we discuss how tutors can adapt to these learning style differences.

You may find the information in Table 8.2 interesting but may not be sure how it applies to you as a tutor. Your tutoring situations offer you a unique opportunity to help a student learn in his or her best learning environment and to help develop strategies for learning in environments that are not his or her preference. Although everyone who attends college has had academic success in the past, many students have not discovered their optimum learning environments. Your knowledge of learning styles can help you guide the student.

In this section we focus on the E-I and S-N scales. Why? On the T-F scale we often cannot make the material we tutor objective or personal based on the desires of the student and, as we saw in Chapter 6, everyone can benefit from being supported.

Likewise, Judging types often need help accepting what they cannot control, such as a professor who is unorganized, but that role is more for a mentor or counselor than a tutor. Perceiving types may benefit from time management techniques discussed in Chapter 7.

Students and Instructors

According to DiTiberio and Hammer (1993), more college professors prefer Intuition and more students prefer Sensing. Since these two types gather information in such different ways, it can greatly affect approaches to teaching and learning.
<table>
<thead>
<tr>
<th>Extraversion</th>
<th>Introversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn best when in action</td>
<td>Learn best by pausing to think</td>
</tr>
<tr>
<td>Value physical activity</td>
<td>Value reading</td>
</tr>
<tr>
<td>Like to study with others</td>
<td>Prefer to study individually</td>
</tr>
<tr>
<td>Say they are high in verbal and interpersonal skills</td>
<td>Say they are below average in verbal expression</td>
</tr>
<tr>
<td>Say they need training in reading and writing papers</td>
<td>Say they need training in public speaking</td>
</tr>
<tr>
<td>Background sounds help them study</td>
<td>Need quiet for concentration</td>
</tr>
<tr>
<td>Want faculty who encourage class discussion</td>
<td>Want faculty who give clear lectures</td>
</tr>
<tr>
<td><strong>Sensing</strong></td>
<td><strong>Intuition</strong></td>
</tr>
<tr>
<td>Seek specific information</td>
<td>Seek quick insights</td>
</tr>
<tr>
<td>Memorize facts</td>
<td>Use imagination to go beyond facts</td>
</tr>
<tr>
<td>Value what is practical</td>
<td>Value what is original</td>
</tr>
<tr>
<td>Follow instructions</td>
<td>Create their own directions</td>
</tr>
<tr>
<td>Like hands-on experience</td>
<td>Like theories to give perspective</td>
</tr>
<tr>
<td>Trust material as presented</td>
<td>Read between the lines</td>
</tr>
<tr>
<td>Want faculty who give clear assignments</td>
<td>Want faculty who encourage independent thinking</td>
</tr>
<tr>
<td><strong>Thinking</strong></td>
<td><strong>Feeling</strong></td>
</tr>
<tr>
<td>Want objective material to study</td>
<td>Want to be able to relate the material personally</td>
</tr>
<tr>
<td>Logic guides learning</td>
<td>Personal values important</td>
</tr>
<tr>
<td>Like to critique new ideas</td>
<td>Like to please instructors</td>
</tr>
<tr>
<td>Can easily find flaws in an argument</td>
<td>Can easily find something to appreciate</td>
</tr>
<tr>
<td>Learn by challenge and debate</td>
<td>Learn by being supported and appreciated</td>
</tr>
<tr>
<td>Want faculty who make logical presentations</td>
<td>Want faculty who establish personal rapport with students</td>
</tr>
<tr>
<td><strong>Judging</strong></td>
<td><strong>Perceiving</strong></td>
</tr>
<tr>
<td>Like formal instructions for solving problems</td>
<td>Like to solve problems informally</td>
</tr>
<tr>
<td>Value dependability</td>
<td>Value change</td>
</tr>
<tr>
<td>Plan work well in advance</td>
<td>Work spontaneously</td>
</tr>
<tr>
<td>Work steadily toward goals</td>
<td>Work impulsively with bursts of energy</td>
</tr>
<tr>
<td>Like to be in charge of events</td>
<td>Like to adapt to events</td>
</tr>
<tr>
<td>Drive toward closure</td>
<td>Stay open to new information</td>
</tr>
<tr>
<td>Want faculty to be organized</td>
<td>Want faculty to be entertaining and inspiring</td>
</tr>
</tbody>
</table>

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Tutor strategies for helping the Extrovert/Introvert Learner:

- Extraverts prefer to talk and may respond with the first idea that comes to mind. They may fall into the trap of guessing. Make sure to confirm that they understand their answer.

- Extraverts prefer interaction with others. Provide group work if possible. Encourage student to discuss assignments with someone else. Learning takes place when they can explain work to others.

- Extraverts prefer nondistracting background noise while studying.

- Introverts need to think before speaking. Make sure to provide plenty of wait time (see Chapter 5). Encourage student to think out loud so you can follow his or her thoughts.

- Introverts prefer quiet while studying.

Tutor strategies for helping the Sensing/Intuition Learner:

- Sensing types prefer to rely on their five senses. Take advantage of audiovisuals, diagrams, charts, drawings, hands-on experiences, and real-world examples.

- Sensing types prefer learning and memorizing facts. Clearly identify important formulas and encourage efficient memorization techniques. Challenge this student to use the facts to arrive at the “big picture” or underlying theory.

- Sensing types prefer step-by-step directions. Try to help the student organize class material in a linear fashion.

- Sensing types may need assistance with learning how to skim material.

- Intuitive types prefer finding patterns and relationships. Take advantage of investigating the theory that leads to the facts.

- Intuitive types prefer to focus on understanding concepts. Encourage student to read all the subheadings of a new chapter to get an overview. Challenge this student to learn facts that support the concepts.

- Intuitive types are prone to making careless mistakes and misreading directions. Encourage them to take time to read the entire question before beginning work and to check work at the end.

- Intuitive types are quickly bored without variety. Ask “what if” questions and go beyond the assignment to investigate trends, general principles, and vision.

Exercise 8.4: Additional Ways to Help Students

What are some other ways you can help students learn?
8.3. Conclusion

As with culture, there is not one best learning style, but we often do not consider how someone with a different preference learns. Understanding your preferences and those of others can help you be a better tutor in two ways. First, you can accommodate your methods to your students’ learning style when appropriate. Second, you can help students learn to adapt to situations outside of their preferences when accommodation will not work.
9. Direct Techniques

Dave, a physics tutor, learned quickly that finding a balance between indirect and direct techniques is important. “I learned this fact from my tutee Sheri. At the beginning of our meetings, it was clear that Sheri did not understand the basic ideas of kinematics, often struggling with describing the basic relationship between position, velocity, and acceleration. In one session, I tried to use Socratic questioning to stimulate her understanding of a topic. The plan backfired when it took us almost the entire hour to work through a single problem, which was a fairly simple problem. Not only did this waste time for both myself and Sheri, but she also became increasingly frustrated at her inability to follow my line of questioning. After this experience, I have been careful not to allow indirect methods to frustrate my tutees; I now actively try to gauge their frustration level.”

Dave worked with Sheri where she could most benefit—developing her knowledge of when to use which equations—and she quickly showed growth in her confidence and ability to solve problems.

As much as this text emphasizes indirect techniques, they are not always appropriate. No matter how much positive reinforcement you give a student, and no matter how long you wait after asking a brilliant question, if the student does not know the definition of dipole moment, for example, then indirect techniques will not work.

As you have seen from the study skills chapter, there are benefits from getting the student to use other resources, textbooks, and notes, for instance. There are times, however, when you will have to make a judgment call. Can the student do this herself? Is it worth having the student read the textbook? Or should you use a direct technique?

9.1. What Are Direct Techniques?

Direct techniques are any that do not elicit responses or ideas from the student. They are the most common teaching technique, and because you have watched teachers use direct techniques for many years, this chapter is at the end of the book. As with many things, direct and indirect techniques fall on a
continuum. For instance, although Socratic questions elicit responses from the student, the tutor is in control of the process. Socratic questions, therefore, are closer to direct techniques than open-ended questions are. Likewise, a short explanation is a direct technique, but it is more indirect than a long lecture. Direct techniques can be useful for addressing specific issues of misunderstanding in a student (Wittwer & Renkl, 2008).

Exercise 9.1: Identifying Direct Techniques

Consider the following statements made by a tutor. Are they direct or indirect techniques?

1. What will you do next?
2. Let’s go back to the last example.
3. As you said, the net force is the sum of all these forces.
4. The first step is to draw a picture of the physical situation.
5. Look at the graph on page 248, and see how concentration varies with time.
7. This reduction in moment of inertia and increase in angular velocity is like how a skater spins faster when she brings her arms in closer to her body.
8. That’s a good idea.
9. It’s $r^2$, not $r$.

Using Direct Techniques

When you choose to use direct techniques there are some ways to make them more effective.

Use the Student’s Prior Knowledge

Prior knowledge is what we know about a topic at the beginning of a learning experience. It is how we see the world; prior knowledge is sometimes called “schema.” When we are exposed to new information we assimilate it into our schema. Sometimes, however, information does not fit neatly into our prior knowledge. Then we must either change our schema, a process called accommodation, or reject the new information (Piaget, 1952).

Consider a person’s schema of a swan. It is a fairly large, graceful, and white bird. Each new encounter with a swan may provide new information. The person may see the swan with smaller swans and assimilate that information into her schema as what baby swans look like. Someone might say, “A baby swan is called a cygnet”; that vocabulary is then assimilated. The schema for a swan now includes: bird, fairly large, graceful, white, with offspring called cygnets.
However, if the person were to travel to Australia, she may see a black swan. The shape, size, and other features of the swan are similar to her schema, but the color is not. Thus, she must either choose to reject the new information or, more likely, accommodate her schema of what a swan is.

Tutor explanations can be especially helpful when they target the specific area or misunderstanding for the student (Wittwer & Renkl, 2008); therefore, it is necessary that tutors pay close attention to students’ verbalizations before beginning an explanation.

**Focus on the Big Picture**

As seen in the expert/novice section, learners may organize information into their schema in very different ways. Tutoring can help students build links in their schema that are more like an expert’s than a novice’s. We can do that by articulating the connections and generalizations behind a problem. This “big picture focus” can help students learn the theory and thus apply it to future problems (Wittwer & Renkl, 2008).

**Keep it Relevant (and Short)**

Students benefit most from explanations when they are directly related to the problems they need to solve (Wittwer & Renkl, 2008). Also, student attention drops significantly in lecture as time goes on (Bligh, 2000). Although it may be interesting to you to delve into the theories and history behind a problem, it can be distracting for a student. Use indirect techniques as much as you can, and then explain only what is necessary to get the student moving again.

**Relate It to Real-World Experiences**

Some subjects lend themselves to real-world experiences better than others. Relating information to something the student already knows can help with understanding and remembering it. Be sure that the example is relevant, and keep it short enough that the student will not get lost in the example and forget what the point is (Bligh, 2000).

**Pause for Processing**

Give your student time to think about the material you have just presented, especially with difficult material, before moving on to the next item or asking a question.

**Use Visual Aids if Appropriate**

Many students can benefit from having a visual representation of a topic. Although some topics (such as physics) may easily lend themselves to elaborate visual aids, many can benefit from some sort of visual representation. For instance, when learning a language, a timeline that identifies tenses can be useful.

**Check for Understanding**

Importantly, make sure to look for evidence that the student understands. Because explanations can cause students to have the “illusion of knowing” (Wittwer & Renkl, 2008), this is more than simply
asking, “Do you understand?” Instead, ask the student to apply the knowledge, teach the material back to you, or find some other way to gauge understanding.

**Exercise 9.2: Using Direct Techniques**

1. What are some advantages of using direct techniques?

2. Some disadvantages?

3. When have you used direct techniques successfully?

**9.2. Conclusion**

It is easy to use direct techniques, but remember that your ultimate goal as a tutor is to help the student learn. When you find yourself explaining, consider whether your explanations are needed. Would a question work just as well? Could you give a few directions to the student instead of explaining? Paying attention to nonverbal signals and listening to the student will help give you guidance about when to use direct techniques.
10. Closing the Loop

After tutoring for a while, Whitney sees a big difference in how she tutors now compared to before. “Tutoring in high school was different because there was no training involved. We could just meet with the student and teach them. And it really was teaching, saying things like ‘This is how you do this.’ There was no focus on helping them become better learners. But now I really work to help students learn how to learn.

“Before I started tutoring here, I thought that my way of studying worked for me, so it has to work for everyone, but after working with students, I learned that my study habits weren’t for everyone. I also found asking students questions frustrating at times, but now I see it really makes a difference.”

Whitney’s growth isn’t complete, though. As an effective tutor, she is always looking for ways to improve. “I’m focusing on using the techniques to really help the student become an independent learner. I find occasionally that I will take the easy approach and handle a situation in a way that I could have done differently. I really am trying to be a tutor that helps the student learn what works for them, and I am doing them by using all the techniques from training. Patience is always a trait I work on!”

It is easy to decide after your first semester or two of tutoring that you have “got it.” You have worked with a variety of students, seen a wide range of issues, and are hopefully more confident. One of the sometimes frustrating but often engaging aspects of being a tutor is that there is always something new. This final chapter asks you to consider how you have grown and how you can continue to grow in the future.
Exercise 10.1: Your Development as a Tutor

Consider your responses to Exercise 1.3: Did your hopes and fears come true? Have they changed?

Consider your work as a tutor this term. Do you strongly agree, agree, disagree, or strongly disagree with the following statements?

1. I am prompt to tutoring appointments.
2. I follow the philosophy of my tutorial center.
3. I complete all paperwork as required.
4. I have a good understanding of the subjects in which I tutor.
5. I demonstrate respect toward my tutees.
6. I am patient when students are having difficulty understanding a concept.
7. I am able to achieve a balance between talking and listening in my sessions.
8. I am able to use my students’ ideas when providing explanations.
9. I use an appropriate variety of questions in my sessions.
10. I use an appropriate variety of positive reinforcement techniques in my sessions.
11. I provide an appropriate amount of tutor support based on each student’s needs on the expert/novice scale.
12. I provide an appropriate amount of tutor direction based on each student’s needs on the adult/child scale.
13. I promote good study skills with my tutees by discussing effective behavior.
14. I use activities in my sessions that help my tutees develop better study skills.
15. I am able to be assertive when necessary.
16. I am aware of learning style differences and adapt my tutoring style to suit the student’s needs.
17. I adjust my tutoring style to individual student’s needs based on his or her culture.
18. I am able to analyze my strengths and areas of improvement as a tutor.

19. I am comfortable asking for and receiving feedback about my tutoring.

20. My own knowledge of the subject has improved as a result of tutoring.

21. I have improved my ability to understand what students do and do not understand with regard to academic material.

22. I have improved my ability to communicate and interact as a result of tutoring.

23. In general, my abilities as a tutor have improved this semester.

   What are your strengths as a tutor?

   What areas of your tutoring performance could use further improvement?

   What area of your performance has evidenced the greatest improvement this semester?

After reflecting on your growth, now consider your future. First, is tutoring something you want to and are able to continue doing? Second, if so, what are your goals for the next term?

**Exercise 10.2: Your Future as a Tutor**

We are now going to go back to questions similar to those posed in Exercises 1.1 and 1.2.

1. Do I believe in the mission of the tutorial center?

2. What training and development must I do in future terms?

3. What remuneration do I receive? Is that sufficient for my needs?

4. Do I have time to tutor next semester, considering my time commitments of:

   a. Class

   b. Other scheduled commitments (another job, religious commitments, extracurricular activities, family responsibilities)

   c. Studying (will next semester be easier or harder than this semester?)

   d. Taking care of myself physically (sleeping, eating, bathing, working out)

   e. Taking care of myself mentally (relaxing, hanging out with friends)
5. Do I want to continue tutoring?

6. If you want to continue to tutor, what are your goals for the upcoming term? How will you meet them? What assistance can the tutorial center provide?

7. If you do not want to (or cannot) continue, what have you learned from tutoring that will help you in the future?

As we saw in the first tutor voice of this book, tutoring can be a hard job, but many of us find that we like the challenges. Whether or not you continue to tutor, you have learned valuable skills through your hard work. Thanks for allowing this book to be part of it!
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