2 Practical Student Tips

CHAPTER OUTLINE

2.0 MEET NICOLE

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Nicole is a freshman who just declared a major in psychology. She is a first-generation college student, meaning that she is the first person in her immediate family to attend college. Because of that, Nicole did not have any guidance about the simple things in college—this includes things like how to take notes and how to study.

In her General Psychology course she was surprised to see that psychological researchers have learned a lot about how people learn, strategies they can use to better remember information, and what does not matter. This caught her attention because her first year of college was much more challenging than high school. At times she has struggled to retain the material—especially when it was time for an exam. This caused her grades to be a bit lower than she expected.

Nicole may have been struggling, but she was smart enough to realize that she needed to do better. If she did not improve her study strategies, she would probably become frustrated and possibly drop out of college. Even though she always thought of herself as somewhat introverted, she gathered some courage and stopped by her instructor's office to ask how she could improve her approach to studying.

Why Did We Tell You This Story?

We know of a lot of students who have been in similar situations as Nicole. Some are unsure of the most effective study techniques, some hold mistaken beliefs about learning and memory that have been falsified

in psychological research studies, and some are familiar with the best study strategies but fail to apply them on an everyday basis. Please read this chapter carefully as we provide a lot of practical advice based on research. And, finally, if you need it, be sure to follow the tips from the previous chapter regarding goals, systems, avoiding procrastination, and the GSD lifestyle!

2.1 DUE DATES? GRADING POLICY? IT'S IN THE SYLLABUS!

Because many students never seem to read the syllabus (e.g., Raymark & Connor-Greene, 2002), one of us created a t-shirt with a simple slogan emblazoned across the front: "It's in the Syllabus!" (the other one has a coffee mug with this slogan). This is frustrating for instructors because the most basic questions about the structure and format of any college course can be answered if students took a moment to read it (Doolittle & Siudzinski, 2010). So, we want to begin this chapter by providing some professorly advice. For almost any question you have about the structure and policies of a course, the answer is probably in the syllabus!

It Is Not Just a Boring Legal Document

Please read your syllabi at the beginning of a semester! We admit that syllabi contain jargon that can be boring—the reason is that college administrators require instructors to include a bunch of university policies. However, there are a lot of important course details spelled out in your syllabi (Harrington & Gabert-Quillen, 2015)—here are some highlights that you should always read:

1. **Professor Contact Information**. Does your professor prefer email, text messages, or phone calls? Pay attention because that is what they will monitor. Also, we check our messages and try to respond within 2 business days—so please do the same!

2. **Office Hours and Appointment Policy.** We highly recommend that you take advantage of office hours! You can use them to (a) get help with difficult topics, (b) prepare in advance for a big project (ask for additional tips), or (c) ask questions about your major, a career, graduate school, research, student clubs, or anything else you want to learn about.

3. **Course Objectives and Learning Outcomes.** Knowing these can help you get more out of the class. Also, these can be a hint as to what is most likely to appear on an exam. Also, pay close attention to skills that you will develop in the course (we expand on this idea in later chapters).

4. **Attendance Policy.** Regardless of the course attendance policy, follow this rule—always attend class! However, knowing the policy will be helpful if an emergency or illness occurs.
5. **Assignment Due Dates and Exam Dates.** Put these in your planner or your phone calendar immediately! Set alarms in your phone to remind yourself at least 1 week in advance.
6. **Assigned Reading and Weekly Topics.** Class sessions are infinitely more productive and interesting when you have prepared by completing the readings. So, please read!
7. **Grading Policies.** One thing that always surprises us is the number of students who ask, "What is my grade?" This is so important that we will present an entire section on this.

Grading Systems

Grades are an evaluation of student performance and academic skills (e.g., Pattison, Grodsky, & Muller, 2013). Most courses use letter grades (some include pluses and minuses), but some might simply indicate whether you passed or failed. Courses may differ as to whether you gain points for correct answers or lose points for errors; mathematically, these are the same, but they can potentially affect student performance (e.g., Bies-Hernandez, 2012). Regardless of which system is being used, the syllabus should always describe the system being used—so read your syllabus! In the following, we review some of the common grading systems.

Add-Up-Points System. This is a common system where each activity (e.g., quiz, exam, paper) is worth a certain number of points. You simply add up the points that you earned (total points) and then divide that by the total number of points that those tasks were worth (possible points)—this gives you your overall grade percentage. You can then look up the grading scale in the syllabus to determine the letter grade. An advantage of this system is that you can calculate hypothetical grades by estimating how well you think you will do on remaining activities. We have an example calculation in Table 2.1 (the grade in the example is based on a typical grading scale where an A is 90–100%).

Weighted-Tasks System. This is similar to the previous system, but here each task category is worth a percentage (weight) of your grade. The calculations are slightly more complex than adding up the points—you have to calculate the percentage for each category, multiply that by the percentage that the category is worth, and then add those values up. We have an example calculation in Table 2.2 to illustrate this idea. You would then look up to see where your calculated overall grade percentage falls on the syllabus grading scale (the example is based on a typical grading scale where an A is 90–100% and a B is 80–89%).

Curved-Grade System. A real *curve* involves ranking students against each other based on their scores. The top students earn an A, students with the lowest scores earn an F, and

TABLE 2.1
Add-Up-Points Example

Course Activity	Points Earned	Points Possible
Quizzes	15	20
Exams	99	100
Totals	114	120

Overall Grade 95% (Points Earned / Points Possible)
Grade: A

TABLE 2.2
Weighted-Tasks Example

Activity	Weight	Points Earned	Points Possible	Weighted Score
Quizzes	20% of grade	50	50	20%
Exams	80% of grade	85	100	68%

Weighted Scores = [(Points Earned / Points Possible) × Weight]
Overall Grade 88% (Sum of Weighted Scores)
Grade: B

the rest are in the middle. One advantage of this system is that you can earn a high grade if you outperform your classmates—however, a very big disadvantage is the possibility that you might have good scores, but if your classmates did better, you might earn a lower grade. In the example in Table 2.3, even though Roberto earned a high score (which might normally be an A), others were ranked above him causing his grade to be lower). Finally, another disadvantage is that you cannot calculate a hypothetical final grade if you do not know your classmates' scores.

Outcome-Based System. This system is designed so that you have to complete a certain number of activities to a satisfactory level to earn a particular grade. For example, you may have to complete eight activities to earn an A, but smaller numbers of completed activities might correspond to lower grades. An advantage of this system is that you simply have to complete the tasks (at a satisfactory level); however, a possible disadvantage is that instructors might not allow re-submissions.

Take-Home Message

Although we admit that there is boring policy information in your course syllabi, do not let that overshadow the many pieces of useful information. Your syllabi are important for planning out your semester. If you ever have a question about the course, check the syllabus first before you reach out to your professor. What is the professor's email address? When are the exams? Is there a paper? How much is the paper worth? What do you need to score to earn an A? The answer to all of those questions is simple—IT'S IN THE SYLLABUS!!!

TABLE 2.3
Curved-Grade Example

Rank	Student	Points Earned	Possible Points	Grade
1	Tyra	99	100	A
2	Emily	98	100	B
3	Sandra	95	100	B
4	Roberto	94	100	C
5	Carmen	83	100	C
6	Jacob	78	100	C
7	Nathan	77	100	D
8	Michelle	76	100	D
9	Alexis	75	100	F


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Action Steps

1. Do not just stash your syllabi away or put them in the trash—actually read through your syllabi and keep them somewhere so that you can find them later. Most importantly, use a calendar to note your reading, assignment due dates, and exams. Use the information from all of your syllabi to create a well thought-out plan for the semester.
2. All students should monitor their grades as they move through a course—if you need help with the math, use spreadsheet software like Microsoft Excel. Set up columns and rows for every graded activity listed in the syllabus. Enter all of your scores (do not forget to add zeroes for any missed or skipped activities) and you can see your current grade status. If you have an Add-Up or Weighted-Total system, you can calculate hypothetical final grade outcomes toward the end of the semester by considering the best- and worst-case scenarios.

2.2 CLASSROOM AND NOTE-TAKING TIPS

Many students think that taking notes is really easy. All you do is copy words from a PowerPoint slide into a notebook. And, if you can do it faster by using a laptop, borrowing someone else's notes, or downloading the professor's slides, then even better—right? *Wrong*. In this module, we are going to debunk some of the myths about note-taking and productive classroom behaviors, and offer practical advice.

Attend Class or Skip?

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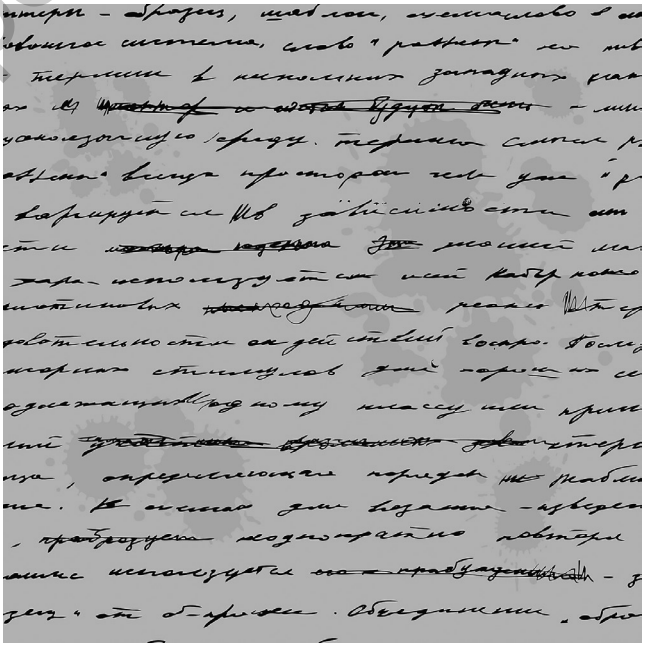
Skipping class, playing hooky, cutting, or ditching—regardless of what you call it, our advice is simple: DO NOT DO IT! If you spent thousands of dollars for a car, would you leave it parked in the garage and never drive it? Well, if you (or your parents) are paying thousands of dollars for college, why skip classes? If you do not care about money, here is something that should get your attention—studies have shown that better class attendance is clearly related to higher grades. In fact, attendance is a better predictor of college achievement than SAT scores, high school GPA, or study habits (Crede, Roch, & Kieszczynka, 2010). So, unless you are going to have a life-changing day away from campus, just go to class.

Do Not Plan to Rely on a Classmate's Notes

Some students may rationalize that they can learn just as much by copying a classmate's notes, and they mistakenly think that getting the notes is just as good as attending class that day. However, there are a number of problems with this approach. First, students assume that a classmate's notes will make sense to them—however, in reality another student's phrasing and abbreviations may seem like gibberish to you (see photo of the handwritten notes—can you make sense of any of that?!?). Even worse, the notes might be sparse and might be missing key pieces of information. Lastly, keep in mind that the student who took the notes may simply not be a very good note-taker.



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Come to Class Prepared—Then Ask Questions

Come to class prepared—read the assigned pages before you come to class. In our experiences, students enjoy lectures and discussions a whole lot more when they already have some familiarity with the topic. When you have some prior knowledge about a topic, you will be more confident about speaking in class; when this happens, you get much more out of your

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class sessions. In contrast, when concepts are brand new and unfamiliar, we tend to not be as interested.

In addition, class can be more interesting and pass more quickly when you actively participate! And remember, participating is more than just attending class—add or ask something meaningful (e.g., Dunn, 2019). Do not stress over this, though, as you can start with something easy—answer a question that the professor poses to the class. You could also ask the professor to clarify or give another example when a difficult concept is presented. And do not worry about looking dumb—people around you may be daydreaming or paying attention to their phones instead of you anyway!

Participating in class is also a way for you to get your professors to notice you in a positive manner. As you read through the rest of this book, you will learn that building relationships with professors is reported as one of the best parts of college by past graduates. When you are close to graduation, you will need to secure strong recommendation letters from professors who know you well. So, get started earning those rec letters every class session!

Where Should You Sit?

Professors sometimes refer to the first few rows and the middle of a classroom as the "high achiever" seats—there are some studies that support this idea (e.g., Marshall & Losonczy-Marshall, 2010), but there are also studies that show no connection between seat location and grades (e.g., Kalinowski & Taper, 2007). When students are asked about their seat selection, they provide various reasons—(a) some sit near the front to get a better view or to participate more in discussions, (b) some sit near the back (or sides) to avoid interactions, and (c) many sit wherever their friends are located (Smith, Hoare, & Lacey, 2018).

Ultimately, where you sit is up to you, but we have some ideas that you might consider (see Table 2.4). First, there may be more opportunities to participate in (and learn from)

TABLE 2.4

Our Top Five Reasons Not to Sit Toward the Back in Class

1. Other students, in front of you, might be using phones or laptops (and this can draw your attention).
2. You may be more tempted to look at distractions on your own phone or laptop if you are "hidden" in the back of the room.
3. It can be difficult to hear soft-spoken instructors when seated in the back.
4. It might be more difficult to read slides or the board when seated farther back.
5. Most of the class discussion activity happens toward the front of the room (and, if you want to learn, you want to participate in these discussions).

discussions when you sit toward the front (e.g., Smith et al., 2018). Second, consider distractions—there may be more of them in your line of sight if you sit in the back. For example, some students are not using laptops to take notes—they are updating social media, shopping, and looking at videos. If you are behind one of these students, what do you think will catch your eye? Finally, although it can be enjoyable to sit with your friends, this can be problematic if they are not taking the class seriously. There is evidence that groups of friends who sit together earn similar scores (e.g., Smith et al., 2018)—so, you might reconsider your seat if you have a group of friends who may bring your performance down. Our point is that you are in class to learn, and any distractions may prevent that.

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Taking Notes

First and foremost, taking notes is a good thing—it can help retention (Bui, Myerson, & Hale, 2013), particularly for deeper levels of learning (Bohay, Blakely, Tamplin, & Radvansky, 2011). Although there are different ways to take notes, we include some general recommendations here. One thing to keep in mind is that you should do your best to be an active note-taker—try not to be a mindless zombie who writes without thinking about the ideas. Underline ideas that seem most important, draw lines to connect related ideas, and add your own thoughts. If you catch your mind wandering and know that you missed something, take note of that so that you can ask a classmate or check the book later. And if an idea does not make sense to you, stop and ask a question.

Does the instructor provide anything? Some instructors will provide handouts of their class slides, some will provide an outline, and others might not provide anything. If your instructor provides slides or an outline, do not be tempted to think that you do not need to take notes! Use the handouts as a starting point, and then add to them. Jot down examples that illustrate concepts. Draw a diagram that is presented in class. Circle or highlight ideas that seem to be most important. Mark ideas that you find especially difficult so that you can focus on them more later.

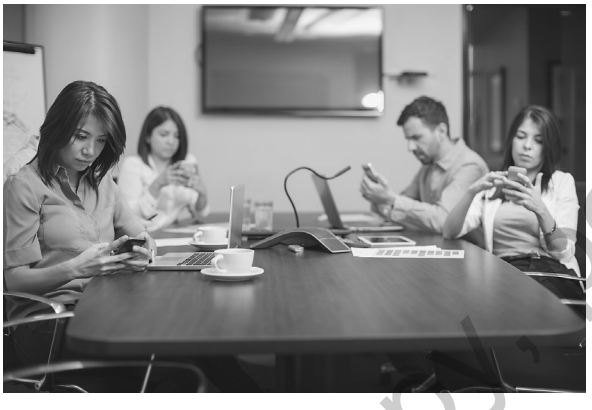
Pay attention to what is said. When instructors use PowerPoint, some students think they only need to copy everything that is on the slides. These students take this further by taking a "mental break" after they finish copying the current slide and do nothing until the next slide appears. If this is you, you are likely missing out on interesting examples or connections that your instructors are describing aloud.

Pens vs. laptops. Computers can be beneficial for students, but there are two major reasons that you should think twice before using your laptop in class. First, there can be a small learning benefit when students take notes *by hand* than when they take notes on a computer (Morehead, Dunlosky, & Rawson, 2019; Mueller & Oppenheimer, 2014). A second reason that you might reconsider using a laptop is that

there are far too many potential distractions—discussion boards, social media, shopping. These activities are negatively related to class performance (Ravizza, Uitvlugt, & Fenn, 2017). The research from cognitive psychology about multitasking tells us that, when we try to do two things, there is a cost in performance (e.g., Finley, Benjamin, & McCarley, 2014).

We recommend that, when deciding between a pen and a laptop for taking notes, you take a few things into account. First, which fits the situation best? If the professor lectures very quickly and does not provide handouts, you may want to type notes so that you can keep up. However, if there are a lot of diagrams or formulas (which are difficult to type), or the lecture pace is slow, then pen and paper might make the most sense. Second, know yourself—if you have been tempted by electronic distractions in the past, then you will likely find yourself distracted again if you use a laptop in the future! Speaking of electronic temptations . . .

Turn your phone off and put it away. We know that this is downright offensive to some people, but we recommend you turn your phone off AND put it away. Unless a family member is in the hospital or your partner is 9 months pregnant, you can survive a little while without your phone. Having a cell phone present—not even using it, just the fact that it is there—can lead to lower levels of attention and worse performance on a task (Thornton, Faires, Robbins, & Rollins, 2014). And, if you cannot fathom the idea of turning off your phone, then you may want to explore the possibility that you have an addiction—see Yildirim and Correia's (2015) questionnaire that assesses nomophobia (fear of being without one's phone).



Are you a visual learner or verbal learner? If we had a nickel for every time students told us that they are either visual or verbal learners, then we would be rich (well, actually, we might not be rich, but we could probably buy a new smartphone at least). Anyway, our point is that some students have learned a "scientific fact," that people are either visual or verbal learners; however, as noted by Brown, Roediger, and McDaniel (2014), there is no scientific evidence that supports the claim that "visual learners" learn better from visual materials or that "verbal learners" learn better from verbal presentations. So, drop that myth and embrace *this* instead—it is more important that you process the information deeply (Craik & Lockhart, 1972) no matter how it is presented.

Using your notes later. Every week (or every other week), take the notes from that time period and condense them to one page. This next warning is very important, though—do not simply recopy your notes! This is typically a waste of time as the mental effort required to do so is very superficial. Instead, you should take the ideas and think about them. Which concepts are most important? Which concepts are most related to each other? Which topics apply most to your life? Which ones do you understand the best? The least? What is most likely to be on an exam?

Once you have thought through those questions, then write out a one-page summary—a nicely organized explanation of what you learned. One way that you think about this is to pretend that you were writing a summary to help out a fellow student who missed class for the past week or two. When you think about the information in this manner, you are thinking about it much more deeply (Craik & Lockhart, 1972) and this builds associations in memory.

Reflect on your note-taking approach. A final point that we want to make is that you should occasionally reflect on your note-taking strategy (e.g., Boch & Piolat, 2005). For example, you might ask yourself if you are happy with your notes and if they have been helpful. Consider comparing your notes to a classmate's notes—does that person do things that seem more helpful? And if you find yourself at a loss because your note-taking approach does not seem to help you prepare for exams, then seek out help right away! Most institutions have student centers to help with this type of skill (if you cannot figure out where to get help, ask your professors—they will know about campus resources).

Take-Home Message

Always go to class—do not pass "Go," do not collect $200—go directly to class (that was a reference to the Parker Brothers' board game *Monopoly*). When in class, sit toward the front and pay attention. If you catch your mind starting to wander, try to change things up by moving around or asking a question. Speaking of asking questions, try to participate in every class as it will help you feel more connected to the discussion. Finally, no one wants to hear this, but it is in your best interest to turn your smartphone completely off and to stash it out of sight (some of you might want to do this with laptops, too).

Action Steps

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1. If you are not already doing this, sit closer to the front in all of your courses. If any of your friends tease you about sitting in the front, just tell them that you need to pay attention and do well. Be careful that you do not slip farther toward the back of the room in the courses you do not care as much about—those are the ones where you probably need to sit toward the front the most.
2. Get in the habit of taking good notes. One important aspect is to make sure that you are an active note-taker, not a passive transcriber. Jot down questions, insights, or points of confusion as you take notes. And, if you want help to improve your note-taking skills, drop in and visit a student center on your campus that is there to help (if you do not know where to go, ask your professors).

2.3 STUDY SKILLS—STUDY LIKE A CHAMPION!

Based on our interactions with students, we expect that some might be tempted to skip this topic because they think that they already know the best ways to study. However, have you ever thought or said anything like the following phrases?

"I don't have enough time to study."

"Cramming the night before a test has been good enough in the past."

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"I would rather <insert time-wasting activity here> than study."

We ask that you give us a chance here—read this module and try some of these techniques (see Table 2.5). These approaches are all backed up by research, so we promise that, if you give these a real chance, you will notice significant improvement in your learning (and grades). We also encourage you to be proactive and adopt these strategies on your own—do not rely on your instructors to always remind you of how you should be studying (e.g., Hunter & Lloyd, 2018).

Distributed Practice

If you only choose one tip from this module, please avoid cramming and spread out your studying. Years of research has consistently shown that spreading out your studying is a very effective way to learn (e.g., Kornell, Castel, Eich, & Bjork, 2010)—this is especially important if you want to retain the knowledge for the long term (which should be your goal). Some students misinterpret this tip to mean that they have to study more. Although it would be good to spend more time studying, this does not have to be the case for distributed practice to be effective. For example, if you were going to spend a total of 4 hours, instead of trying to cram for 4 continuous hours the night before the exam, you could distribute your studying across eight different nights (30 minutes per night). In either scenario, you are spending a total of 4 hours studying—but, the second approach is a much more effective way to learn. One big reason for this leads us to our next tip. . .

TABLE 2.5

Our Top Five Study Tips

1. Distributed practice—spread out your studying of a topic across days or weeks
2. Study in chunks—avoid lengthy cramming sessions on the same topic
3. Set a goal—if you know what you want to accomplish, you will know when to stop
4. Read—time in college classes is limited, so you have to spend time learning on your own
5. Test yourself—embrace quizzes as a chance to practice for upcoming exams

Study Each Topic in 15- to 60-Minute Chunks

Imagine that we asked you to work at the airport—your job is to scan carry-on luggage and watch for banned items (e.g., guns, knives, 5-ounce bottles of water, etc.). At first, you might find it interesting and you might get excited as you identify some objects. However, after a while, your performance will drop off—this is normal and to be expected. The reason is that it is difficult to maintain attention on the same thing for a long period of time (Howe, Warm, & Dember, 1995).

Because of that, we recommend that you only study for up to 60 minutes on the same topic. At that point, take a short break or switch to a different topic or course. Once you go beyond an hour on the same topic, the effectiveness of your studying will diminish. However, we also understand that you cannot always find 60-minute chunks to study. If that is the case, start small—try to find 15–20 minutes here and there when you can do a little bit of studying. If that is successful, you can always make those sessions longer.

Make a Goal for Each Study Session

Rather than cracking open your books and notes and broadly declaring that right now it is "time to study for 45 minutes," set a specific goal of what you want to accomplish. For example, you may want to read Chapter 5 and to take notes on the key terms. If you finish that in 30 minutes, then reward yourself by taking a break. In other words, stop thinking of yourself like an employee who gets paid by the hour; instead, work until you finish the task. A second reason for making a goal is that it gives you a purpose—when you find yourself bored and wanting to go outside, remind yourself that you just need to complete the goal before going off and doing something else.

Complete the Readings

Read the book! Read assigned articles! It might be tempting to adopt the mindset of "read as little as possible," but please try to resist that approach. Instead of thinking of reading as a chore, think about it as a way to explore new topics (that's a big reason why you chose to study psychology, right?). Some students think that all of the material worth knowing is covered during lecture or in demonstrations, but a great deal of knowledge can be gained by focusing on completing the assigned reading outside of class (e.g., Copeland, Scott, & Houska, 2010). Also, remember that having a foundation of knowledge (from reading) can help you learn more during class lectures and discussions (e.g., Cerbin, 2018).

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Finding time. It is not that difficult to find time to read, but you must make it a priority. For example, do you need to watch 4 hours of television in one night, or can you survive on 2? We understand that your friends are all going out at night and that you will become a

social pariah if you stay home, but try this—read for a little bit and then reward yourself by going out afterward. And you might have a lot more fun because you will be more relaxed knowing that you did the reading.

Should you read before or after class? There are pros and cons to both approaches, but our recommendation is to read before class. If you do not fully understand all of the topics from the reading, you can jot down questions and then ask them in class.

Avoid sleep-reading! Most people have experienced this at some point—as you are reading a page, you realize that you have no memory for what you just read. One way to get around this is to limit your studying to 60-minute chunks of time. A second approach is to give yourself a goal while reading—you will focus more if you are trying to figure out what ideas mean and how they connect. Finally, another tactic is to take time to summarize what you just read. This is especially helpful if you put the ideas into your own words; the *generation effect* (Slamecka & Graf, 1978) is a phenomenon where you remember information better if you generate it yourself rather than when you passively receive it (or blindly repeat it from someone else). An added bonus is that now you will have a summary to use when you study later!

Pick a Good Spot

Some people study more effectively in complete silence, whereas others prefer a little bit of background noise. Find what works best for you—you might find that your preferences change based on the topic you are studying or possibly based on your mood. However, we want to warn you not to kid yourself and think that you can study effectively in a distracting environment. Turn off the television, put away your phone, and consider staying away from friends.

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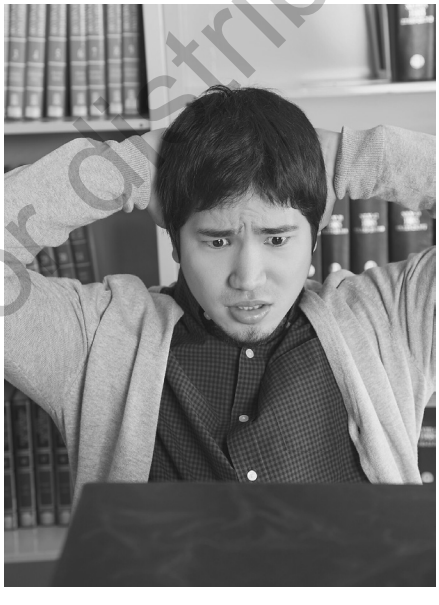
Use Mnemonics

If courses require you to memorize information, we recommend that you try using mnemonics—it is possible for anyone to have a great memory by applying mnemonics properly. These can be simple, such as (a) creating a vivid image of the information, (b) altering the information into something funny or interesting (e.g., to remember one of the primary functions of the amygdala, think of it as an emotional person named Amy G. Dala), or (c) using acronyms (e.g., PET for positron emission tomography) or acrostics (e.g., Please excuse my dear Aunt Sally for the mathematical order of operations). All of these techniques are simple and you can personalize them for yourself (see Carney, Levin, & Levin, 1994, for examples of various mnemonics).

If you want to remember something really well, then you could try a formal mnemonic. These techniques have been around since Ancient Greece (when a strong memory was

useful because it was difficult to find a place to charge your smartphone) and, with a little effort, they can work really well. With the *Peg-Word* mnemonic you can pre-memorize number rhymes such as, "One is a bun, two is a shoe…" Then, you associate the list of new information with each rhyme (e.g., think of the first item in a hotdog bun, the second item in an old pair of shoes, etc.). This structure also allows you to keep the information in sequential order. Other formal mnemonics include the *Memory Palace* or *Method of Loci*—look these up or ask your instructors about them. Regardless of which you use, the payoff can be huge because these mnemonics can help you retain a lot of information!

Test Yourself



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Most people think that exams or quizzes are only used to test what someone has learned. However, a lot of research has shown that tests improve memory better than re-reading (Agarwal & Bain, 2019; Chan, McDermott, & Roediger, 2006)! Of course, you must first read or hear the information initially, but, after that, follow it up with a practice test or quiz rather than re-reading your notes or the book. Importantly, though, do not have your notes or book open in front of you—try to recall the answer from memory. You can do this with flashcards—again, try your best to answer the question from memory before you look at the answer!

Testing is beneficial because it can help you evaluate what information you can and cannot recall (Son & Kornell, 2008). Second, testing yourself is a way to practice what you will be doing on the actual test (Roediger & Karpicke, 2006). During the real test, you likely will not have your notes or book in front of you—you will have to recall information from memory. Why not practice what you will actually be doing on the test? Finally, a third benefit is that testing yourself on some pieces of information can even improve your memory for related information that was not tested (Chan et al., 2006). In other words, you do not necessarily have to test yourself on every single fact to see a memory benefit.

Build a Foundation, Then Add Ideas

Have you ever tried to learn a new language? It tends to be difficult at first because you have no prior knowledge to serve as anchors, and you do not have a clear idea of how to organize the information. The same is true when you try to learn a new subject area in college. Despite this problem, we sometimes see students who keep plowing forward and reading new chapters even though they do not understand the initial ones. When you do this, you have not established a foundation to help you connect and organize the new ideas. Our recommendation is to start slowly and to make sure that you can establish a small foundation of knowledge in the new topic area. Once you do this, then you can start linking new ideas to the foundation. And, if you are having problems in a class, utilize your professor's office hours early in the semester!

Take-Home Message

A lot of students think that they know the best ways to study and learn, but unfortunately these "common sense" approaches are not always backed up by research. As we said earlier, if you only apply one of our recommendations, you should spread out your studying across days and weeks instead of cramming it all in one night. It is okay to keep the study sessions short—just be sure to set goals for what you want to accomplish each time and to complete the assigned readings! You do not have to apply all of the advice that we provide here, but try out some of these ideas—put the information you learn into your own words by summarizing ideas, create mnemonics to make material more memorable, and test yourself as a way to practice for your upcoming exams.

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Action Steps

1. Find small chunks of time in your days when you can do a little bit of reading or studying. Make sure that these occur across several days (or every day) of the week so that you can spread out your studying.
2. In addition to using distributed learning, apply at least two of the tips to your studying approach this semester. For example, if you previously avoided reading, start incorporating that into your routine (starting this week). If you never tried testing yourself, start out with flashcards (some apps have made it easy to create these). The important thing is that you use methods that are supported by research and, most importantly, that you actually use them!

2.4 QUIZ AND EXAM TIPS

Do you despise tests? Sure, we all do (professors, too—we have to spend time making them and grading them). In this module, we hope that we can lessen your hatred or anxiety associated with tests by providing you with some important information. We first focus on test anxiety and some steps you can take to deal with it. After that, we describe a number of tips to help you improve your performance on different types of tests.

Dealing With Test Anxiety

It is not uncommon to feel anxiety before and possibly during a test. So, rest assured that you are not alone if you feel this way. Also recognize that a little bit of jitters can

actually be a good thing—when your body is at an increased arousal level, performance can be better; however, you do not want to be too anxious as too much arousal might not be helpful.

One of the best ways to lessen test anxiety is to spend time preparing beforehand. We just covered a whole bunch of classroom and study tips in this chapter, so use those to prepare yourself. It can also be helpful to start a test with the right mindset. Knowing that you are prepared should give you confidence that you can do well, but tell yourself that it is not necessary to be perfect—it is okay to make some mistakes. Also, remind yourself that this one test does not define who you are—if you do well, then great; but, if you do not do well, it can be a learning experience (we have more on the topic of failure in the next chapter). Even the best and brightest superstar students have times when they do not do well.

On the day of the test, arrive early enough so that you are not rushed and can find a comfortable seat. If you find that you are feeling very anxious, we have two things that you might try. One approach is to pull out a sheet of paper and spend a few minutes writing about your worries—this act can help "offload" the anxiety and has been shown to improve test performance (e.g., Ramirez & Beilock, 2011).

A second approach is to try a simple focused breathing exercise (e.g., Clinton & Meester, 2019). Start by closing your eyes, then slowly inhale for about 7 seconds, followed by a slow exhale for 7 seconds—repeat as needed (you might need a few repetitions before you feel better). Finally, use the following test-taking tips that we provide below—knowing and applying these can increase your confidence and, hopefully, improve your performance!

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Embrace Quizzes—They Help You Learn

As we noted in the previous module, one big misperception that many students have about quizzes is that they are simply a tool to measure how much you have learned. However, there is a large body of research that has shown that testing is also an important learning tool (Roediger & Karpicke, 2006)! So, instead of dreading those pop quizzes, embrace them—the goal is to improve your memory so that you can do better on the exam and remember the information better later!

Tips for Multiple-Choice Questions

One common form of testing is the use of multiple-choice questions. Multiple-choice questions can be very specific, asking for detailed knowledge such as definitions or asking you to differentiate between a set of terms. Although many students assume that

multiple-choice questions are easier than other types of questions, such as essays or short answers (after all, the answers are right in front of you), that is not always the case (see Table 2.6 for a summary of our tips).

1. Our first tip for multiple choice is to try and answer the question before you look at the choices. If you have been studying by using practice tests to recall information, then you should be prepared to do this. If you can recall the answer, then simply look for it among the choices. But, make sure that you read through all of the choices as sometimes the instructions will be to choose the BEST answer.

2. Our second tip is to scan the choices and cross out the ones that are obviously wrong. When there are four choices, even if you do not know the answer, you have a one in four (25%) chance of answering it correctly. However, if you can eliminate one choice, then that improves your odds to one in three (33%). If you can eliminate two choices, your odds are one in two (50%). And if you can eliminate three choices, then all that you have left is the answer!

3. If you are not sure about a particular question, mark that question so that you know to come back to it later. There are two reasons that this can be helpful. First, by letting the question incubate, sometimes the answer will come to you later (e.g., Vul & Pashler, 2007). Second, you may find a hint to the answer as you read through the other questions on the exam—that is, it is possible that another question might provide a retrieval cue to help you with that earlier question.

4. Proofread your test to make sure that you answered every question. Of course, this assumes that there is no penalty for incorrect guessing (some standardized tests like the SAT penalize for guessing, but most professors do not use this approach). One of the most frustrating things that we see is when a student leaves a question blank—as we noted earlier, with four choices you have a 25% chance of guessing correctly; however, if you leave it blank, you have a 0% chance!

5. These final tips should be used with caution, as they only apply to poorly designed tests. Some instructors will make the correct answer the longest choice. A reason for this is that they carefully write out the correct answer, but may not take as much time to write out comparable incorrect choices. Also, some instructors will only include an option of "All of the above" or "None of the above" when it is the correct choice, so if you happen to be stumped by a particular question, you can try that choice. However, as we noted, do not blindly apply these strategies—only rely on them when you are in trouble and have no idea which answer to select.

TABLE 2.6
Multiple-Choice Question Tips

What are some good tips for answering multiple-choice questions?
a. Answer the question before looking at the choices
b. ~~Never cross out answers that are clearly wrong~~
c. Mark difficult questions so that you remember to return to them later
d. Proofread to make sure that you answered all questions
e. Choices (a.), (b.), and (d.) are all correct

Tips for Short Answer and Essay Questions

Short answer and essay questions are different from multiple choice in that they do not provide choices. Instead, your task is to retrieve the information from memory. Here are some tips for these types of questions.

1. Be sure to insert keywords into your answers whenever you can. The reason for this is that short answer and essay questions are more difficult to grade than multiple-choice questions. So, be crystal clear with your response as instructors will likely notice keywords when they are scoring responses.

2. Our second tip is to use margins, the back of the page, or scratch paper to create a rough outline of your answer. An organized response tends to be graded as better than a jumbled mess of a response. We do not expect you to write out a full outline—all that we are suggesting is that you jot down some ideas to help you organize your thoughts for the answer that you write.

3. Before you move on to the next question, check to see that you *actually answered the question* that is asked. In some cases, students might write a lot of information but they forget to actually answer the question. Yes, being able to include a lot of information is important, but it is even more important to demonstrate that you understood what was asked.

4. As we suggested in the multiple-choice tips, if at first you cannot think of a response, then read through other questions on the exam to look for hints or keywords that you can use. Often times, other questions (or even choices listed in a multiple-choice question) can trigger a memory that can help you.

5. Our final tip is for a situation in which you are completely clueless as to what to write. If you leave it blank, you are guaranteed to earn zero points. One approach that you can try is to pose a hypothetical question that is somewhat related to the question on the exam and to answer that. Here, you are demonstrating that you have knowledge on a relevant topic, and if the grader is lenient he/she may give you partial credit for trying. Keep in mind, though, that it might not work; however, trying this approach is better than a guaranteed zero for leaving it blank.

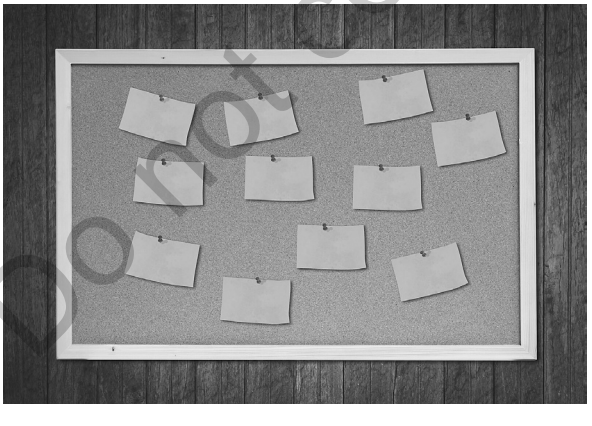
Additional Exam Tips

But wait, there's more—here are a few more exam tips that you can use! These can be helpful no matter what types of questions are on the exam.

1. Be sure to read the instructions—sometimes there are surprises in the instructions. For example, a generous instructor may inform you that you are allowed to use your notes, a calculator, or possibly work with others. You may also find that, instead of having to answer all of the questions, you are allowed to skip one. Always read the instructions before you begin!
2. Along this same line, be sure that you read questions carefully. For example, some questions may insert a word that can completely change a question—"Which of the following psychologists was NOT a behaviorist?"—if you miss the word "not" then you might look for names like "Watson" or "Skinner."
3. In traditional in-person classes, check with your instructors to see whether you are allowed to ask questions during an exam. If they allow it, ask them for clarification if you encounter a confusing question or one that is extremely difficult to answer. The instructor may rephrase a question for you that might make it clearer!
4. Our final tip is to save your old exams and to learn from them. For example, many instructors will hand back old exams and go over the correct answers. Do not just look for your grade and celebrate (if you did well) or pout (if you did poorly). Also, do not use this as a moment to beg for more points or to complain about scoring. What you should be doing is reinforcing the information you knew and learning from the questions you missed. Use this time to learn!

Take-Home Message

When you think about tests, remember that they are not only useful for evaluating what you know but can also be beneficial for learning. This can be done by participating in quizzes before an exam or by testing yourself. You can also review an old exam to reinforce the answers you knew and to learn from your mistakes. In terms of taking tests, there are a number of tips that we outlined in this module that you can use to improve your performance. Please take the time to learn these strategies as your future self may thank you for the higher grade point average.



Action Steps

1. Keep a copy of this module and/or your notes from this module and review them before every exam (we recommend printing a copy and putting it on a bulletin board near where you study). After a while, you will hopefully start to implement these strategies automatically.

2. It is possible that you have a preference for certain types of exam questions—in our experience, most students prefer multiple-choice questions because they think they are easier. But, regardless of your preference, accept the fact that exams can have any types of questions—when you embrace that fact, you can be better prepared for anything.

2.5 LEARNING FROM GRADED ACTIVITIES

How many of you have done the following? After receiving a graded copy of your paper back from the instructor, you immediately look for the grade or score. If you earned an A, then you pat yourself on the back and *never look at it again*. If you did not earn an A, then you flip through the paper trying to assess whether the feedback seems to justify the grade. At that point, you stuff the paper away and *never look at it again*. We use this example to illustrate an important point—most students either ignore feedback or they only care about the feedback to the extent to which it justifies the grade. Our goal in this module is to explain how students can use grades and feedback to improve both their learning and their performance in the course.

Papers and Essays

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In our ideal classroom, all papers would consist of three parts—(1) a student's initial draft, (2) specific, actionable feedback from the instructor or classmate(s), and (3) an improved version written by the student. In this scenario, you should ALWAYS use the feedback when revising your paper. In addition to using the feedback, re-read the instructions or grading criteria for the paper; this will help you to better assess your work before you re-submit it (see Wiggins, 2012).

Even if you do not have to turn in a revision, we recommend that you use any professor feedback to make actual edits to your paper. With computer software like Word or Google Docs, this should be pretty easy (it's not like you have to re-type the entire paper from scratch using a typewriter!). Editing your work will help you improve your writing. Also, you never know if, in the future, an award, graduate school, or job ad will ask you to submit writing samples—your improved revision will be a much better sample than the original draft!

Exams and Quizzes

Some professors (like us) will review exams when we hand them back to students because it can be an important learning activity. First, you can see which answers you missed—this will help you understand what topics you do not fully understand. If your

course has cumulative exams, then this benefit should be readily apparent—that topic might be asked about on a future exam! However, even if you do not have cumulative exams, use this time to learn from your mistakes. A second reason to review an exam is that you might gain a better grasp of what types of information are most important to the instructor—this can be very valuable for future exams in that course.

Do Not Get Offended—Learn to Take Criticism

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We have seen too many students who end up moping if their exam or paper grade is not as high as they had hoped—be careful not to make this mistake. Hold your head up! It's just one score, not the end of the world! Things could be worse! Are those enough clichés to make our point clear? Yes, the grade might not be what you wanted, but do not go straight to your professor with a negative attitude. An interesting psychological phenomenon to keep in mind is that people have a tendency to consider themselves and their work as above average (Kruger & Dunning, 1999).[1] In other words, you are not always the best judge of your own performance. You may think that your essay should have earned an A+, but you have to acknowledge that you are biased when judging your own work.

If you are feeling frustrated or upset by an exam score, check your errors with your notes and possibly the textbook—try to figure out what you got wrong or misremembered. With a paper, keep in mind that professors try their best to grade fairly and to provide helpful feedback. So, do not take a poor grade personally—trust us, the professor is not out to get you! Instead, review the feedback to learn why you missed points or what you could have done better.

If you are still unsure as to why your grade was recorded as it was, then wait 48 hours and come back to it. When you first get a grade back, it is easy for expectations or emotions to influence your views; after a couple of days, you can look at the errors and feedback more objectively. At that point, if you still have questions, set up an appointment with your professor (or visit during office hours). Try to view that meeting as an information-seeking session and not an attack or an interrogation—ask about how you can improve. Feedback about how you can improve is the most useful tool for your future performance (see Cheng, Liang, & Tsai, 2015).

Contrast this approach with one characterized by acting out of anger or frustration. If you approach or email your professors with a defensive tone, they will probably be less willing to help. Put yourself in the professor's shoes—would you want to help a student who acts combatively and only seems to care about the grade or one who acts calmly and seems

[1]In what might be the funniest example of this phenomenon, people made judgments about who would go to heaven (Stanglin & Gross, 1997). A large majority thought that Mother Teresa, a woman nominated for sainthood, would go to heaven—but, the interesting part was that respondents rated *themselves* as the most likely to go to heaven!

interested in improving and learning? Remember, college is primarily about the learning process and acquiring skills—grades are a part of it, but not the most important part.

Take-Home Message

Grades are not just an endpoint of an assignment or exam—be sure that you take time to learn from your graded work! Before you see a grade, prepare yourself that the grade might be lower than you were expecting. If it is lower than you hoped, then (a) check exam errors by referencing your notes or textbook—for a paper, try to consider the feedback objectively, (b) if you still have questions about the grading, wait 48 hours until you set up a meeting with your professor, and (c) finally, go into the meeting with a calm demeanor with the goal to learn, not to fight over a grade!

Action Steps

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1. Make a special effort to attend class on days when papers and exams are returned. This is a great opportunity to start learning from your mistakes.
2. Make it a habit that, when a paper is returned to you with feedback, you use the comments to revise the paper right away. By doing that, you can improve your writing skills and you can save that improved paper to possibly use as a writing sample in the future (see our later chapter that covers how to document your accomplishments)!

2.6 ADVANTAGES AND DISADVANTAGES OF BEING AN ONLINE STUDENT

In some ways, the increase in the number of online courses over the past decade has been very helpful for both colleges and students. However, with every benefit, there are bound to be some costs. This module briefly considers the pros and cons of online courses. We do not wait to come across as grumpy old men who hate technological progress (back in our day, we chiseled class notes into stone tablets!). To be sure, there are some considerable disadvantages that online students encounter (especially students who try to do all or most of their education online)—*but*, there are some ways that online students can try to overcome them.

Advantages

An obvious advantage is that online students can work from home instead of having to physically be on campus. This can save time as students can work on their own schedule. Besides the constraints of due dates, students can choose to listen to lectures, read materials,

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and take exams when they want. This can be a tremendous advantage for students who have to balance a work schedule on top of a class schedule.

A second advantage is that there are many resources available online. For example, library resources can be accessed via college websites, large psychology organizations have websites that contain a lot of useful information, and search engines like Google make a lot of information very accessible. If you do not know how to do something you can conduct an online search right away while working on a computer or phone.

Disadvantages

Although the advantages listed previously can be quite helpful, we have to warn that too much of a good thing can have potential disadvantages for students. The occasional online course can be a nice change of pace for one's schedule; however, when students try to complete an entire degree program online, there are some disadvantages. We share these, not to derogate online students or programs but to inform and caution those considering virtual instruction.

Several years ago, the *Massive Open Online Course (MOOC)* movement was seen as a panacea for many of higher education's problems—access to all, reducing overhead costs, and so on. However, this grand experiment is now all but dead in the water due to low completion rates for these online courses (see The Hechinger Report, 2015). Still, you will likely have the opportunity to take several, if not more, online psychology courses in the years to come. It is important to note that even the most pedagogically sound online courses lack opportunities to apply and integrate new skills and knowledge (Margaryan, Bianco, & Littlejohn, 2015). Moreover, students and professors often cannot engage in simple—but effective—instructional techniques such as the Socratic Method (see Chesley, 2013) in virtual classrooms.

Besides the instructional challenges associated with online courses, students should not overlook very practical considerations. When you are not physically on campus, getting involved in activities like serving on a research team can be very difficult. As with many jobs, most professors want to meet research assistants in person. Also, because human participants' data need to be protected for ethical reasons, a lot of coding and analyses must be done on secure computers (i.e., on campus, not online).

As we noted with our classroom tips earlier, students should do their best to avoid distractions. Unfortunately, potential distractions are also prevalent for online courses, as students report taking part in a variety of distracting activities (e.g., music, video games, phones) while viewing online lectures (Blaisman, Larabee, & Fabry, 2018). Not surprisingly, students remember significantly less information from the lectures when distracted.

Another problem is that getting to know professors can be more difficult. Sure, you can have conversations over email (or FaceTime or Skype); we all communicate with people

electronically. However, in-person (i.e., face-to-face) communication can be more memorable (which is important if you want professors to remember you and possibly write a letter of recommendation for you!). Networking and professional growth can potentially suffer because you may miss out on in-person campus activities and meetings. Organizations like Psi Chi (the international honor society in psychology) may hold meetings on your campus with guest speakers and informative panels. Student organizations may not have the time or resources to record these meetings and post them online; plus, you miss out on the chance to meet other students who attend these meetings.

One thing that students might not always consider is that there is slightly less trust between professors and students online because cheating can be perceived as a major issue (e.g., Trammell, Morgan, Davies, Petrunich-Rutherford, & Herold, 2018). This is because of the online environment—without using excessive methods (e.g., anti-cheating services), professors can never know for sure whether it is the student who is doing the work or taking the test. Also, students might be tempted to use notes, materials, or search engines to help with exam questions. Because of these issues, instructors have a tendency to make online exams more difficult; these more difficult exams may require more critical thinking and connecting of ideas rather than simple rote memorization of terms. Also, to ensure that students are learning and completing ideas, there are likely going to be more writing assignments so that students can demonstrate understanding, whereas, in a classroom, instructors can simply ask a question aloud to check for understanding.

A final problem that online students may encounter is that not all courses needed for a degree will be offered virtually. Although online course offerings have expanded a great deal in recent years, because it is a relatively new process, not all subjects are offered. For example, some courses that require in-person interaction for skill development might not work best in an online environment.

Overcoming Disadvantages

The easiest way, if possible, to overcome these disadvantages is to mix in some time on campus with the online courses—that is, instead of taking your entire psychology curriculum online, take some in-person courses from professors you want to meet, and then be sure to interact with them (e.g., participate during class discussions, speak with the professors during office hours). In addition, you can join student clubs or attend meetings held by campus organizations. This approach will give you the best of both worlds—flexibility with some online courses along with networking opportunities on campus.

If spending time on campus may not be possible, there are some things that students can do. First, try to take more than one course from the same professor and, when doing so, be sure to communicate with the professor so that he or she will get to know you. Keep in mind that the goal is not to pester the professor; it is to build an online professional relationship so that he or she will remember you (in a positive manner). Along this line, it may be helpful to use (professional-looking) photos in your profile or email—this will help the professor to put a face to the name. Also, if you ever do plan a trip to campus, set up a face-to-face meeting with some of your professors.

Another tip is to contact research groups and ask about opportunities to participate from afar. When you contact them, be sure that you are up front with them about your situation and why you cannot be on campus. Be prepared to hear a lot of rejection (e.g.,

"Thanks for your interest, but we need our research assistants to work on campus…"), but you will never know if you do not try.

Another approach, if you live far from campus, is to look for student organizations, research projects, or resources at a school that is nearby; in some cases, they may allow you to participate. However, keep in mind that you may have to be a student at that institution, so you might have to weigh the pros and cons as to whether signing up for credits is worth it (and whether it will affect your graduation timeline at your current school). Both of us have accepted requests made by students from other schools (who were going to be near our campus over the summer) to work on research over the summer, so this is a real possibility.

A final idea is to consider attending a "student-friendly" annual research conference held by a professional psychological organization (for details on this, see our modules on psychology organizations). Before the conference, contact the Psi Chi officers at your school to see if there is a group of students planning to attend the conference. If there is, arrange plans to meet with them. You can also look through the conference schedule and find professors and students from your school who will be presenting—for example, you can attend their poster presentations and introduce yourself.

Prepping for Success in an Online Course

Imagine if your online instructor asked, "How many assignments and quizzes do you plan to miss this semester?" Of course, almost all of you are going to say zero—but our experiences with online courses is that nearly half of you will miss at least one activity, and some of you will miss a large number of activities. Because we want all of you to succeed, we want to help you minimize this possibility. The following tips introduce common situations that we have seen, along with solutions for how to deal with the problem.

1. **Situation:** Good online instructors will send out at least one reminder email each week, but, if you never check your email, you will not see those emails.

   Solution: Check your email daily—one way to do this is to add your email to your smartphone. If you never check your school email, set it up so that it automatically forwards messages to an account that you actually do check.

2. **Situation:** With in-person courses, you have set days/times for class; with online courses, you are free to work whenever you want. However, that freedom brings the possibility that you may forget about the course.

   Solution: Set up a block of time that you can consistently set aside each week to work on your online course. Pick a day before the due date, as some activities will require more time and effort.

3. **Situation:** Different weeks may require different amounts of time and effort.

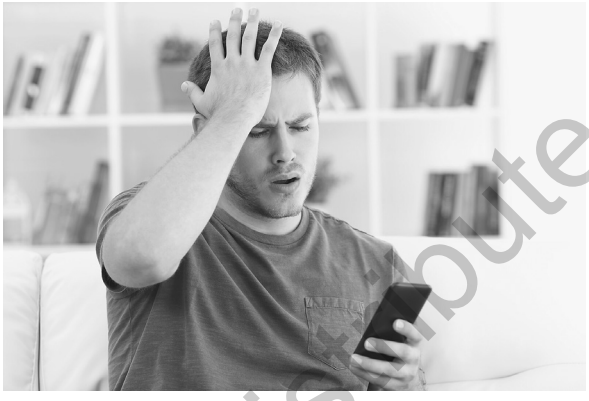
   Solution: When you finish a module, take a few minutes to look ahead for what is required for the next one. This can give you a "heads up" as to whether there are any activities that will require you to invest more time or to start early.

4. **Situation:** Sometimes we need external cues to remind us to do something.

   Solution: If you use a hardcopy planner, write in your assignments and due dates. If you prefer the electronic calendar on your smartphone, program it to send you weekly reminders about assignments and due dates.

5. **Situation:** When you attend an in-person class, you might chat with the people sitting around you (sometimes you remind each other about deadlines).

   Solution: Reach out to your classmates and see who else is interested in creating a peer "reminder" or "accountability" group. Use a smartphone app (like *GroupMe*) to text each other reminders each week.



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Take-Home Message

Online courses have some advantages over traditional, in-person courses. However, before you dive into them, be sure that you are aware of the disadvantages—especially if you want to complete all or most of your courses online. There are some steps, outlined previously, that you can take to mitigate these issues; however, to get the most out of your college experience, including the resources on campus and the networking opportunities, we highly recommend that students spend significant time on campus (if possible). As you will see in a lot of areas in this book, a lot of our recommendations for preparing yourself for a career or graduate school are easier if you spend at least part of your time on campus instead of exclusively working from home and taking all of your courses online.

Action Steps

1. If you are in an online course right now, apply the tips that we described in this module. Do it right away so that you can benefit (and decrease the odds of procrastination).
2. If you take most of your courses online, mix it up in the future by adding some in-person courses. In addition (or if that is not possible), figure out ways to get involved on campus by meeting professors or attending campus events.

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