

Pathways to College Success

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CWI 101 LEADERS



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Welcome to *Pathways to College Success*!

This open educational resource has been developed for use in CWI 101, a first-semester experience course at the College of Western Idaho. Most higher education institutions include similar orientation courses, and, fortunately, we've been able to rely on two previously existing OER textbooks developed for the same purpose: [Blueprint for Success in College and Career](#) and [College Success](#). As with many OER textbooks, these two textbooks rely in turn on other material (details [here](#)). Each chapter includes details on the original source at the end.

Over time, our textbook will be updated with original content from students at our institution. New content will be clearly labeled.

Our Philosophy

Our textbook remixes these preexisting sources to fit the career pathways model of course learning developed by Liza Long, Department Chair of Integrated Studies, Amy Vassar, CWI 101 Coordinator, and the CWI 101 Advisory Committee. The purpose of a career pathways model is to provide a space for students to hone basic student success skills within the context of career exploration. Students who attend our college expect their education to be closely linked to their career goals, and the career pathways model ensures that alignment happens. We believe our model will foster academic, personal, and professional success for our students.

How You Can Use This Text

While the textbook has been developed for a career pathways model, this is also a “use-it-as-you-need-it” kind of text. In other words, you don't have to read every word from beginning to end.

Other instructors who wish to use our textbook may select individual chapters as needed.

Accessibility

Our textbook has been written with accessibility in mind. Instructors can upload the whole text to online learning systems, such as Blackboard, Canvas, and Google Classroom. However, we know that consistent WiFi is a problem in rural areas of Idaho, so the book can be downloaded in multiple formats including PDF and EPUB or MOBI files. It can also be accessed through text-to-speech readers provided through your learning institutions or other common text to speech tools, such as Read Aloud and Dragon. All videos have subtitles/closed captioning. We welcome feedback about ways that we can make our book more accessible.

A Note about Citations

This text includes a combination of chapters using MLA and APA, maintaining a single format consistency within that particular chapter. Using MLA and APA mimics real-world writing in which both formats are used extensively. While students would never want to combine formats within one paper (using a single format is important in that context), students should have knowledge of both formats that will be used throughout their college career.

Land Acknowledgement

We would like to acknowledge the traditional and ancestral lands

of the Shoshone-Bannock, the Shoshone-Paiute, the Coeur d'Alene, the Kootenai, and the Nez Perce tribes on which we are teaching, learning and working today. The struggle for Indigenous rights is deeply connected to human rights. It is important that the stories and traditions from tribal nations are heard, celebrated, and protected.

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PART I

WHAT'S COLLEGE FOR?

I. Passion

DAVE DILLON

“Ganas. That’s all you need. The desire to learn.”

– Jaime Escalante

Think about what you are passionate about. It might be family, friends, a significant other, a pet, an upcoming vacation, or what you might have for dinner. Different people are passionate about different things. Ask yourself: Why are you passionate about those things? What makes you passionate about them? Now ask yourself if you are passionate about school.

Author’s Story

I can think of many things I would rather do than sit in a classroom listening to a lecture. I’d rather be relaxing at the beach, traveling to a new place, or playing Mario Kart with my family and friends. But when I was in college, my education was extremely important to me. I had a tremendous amount of passion, which allowed me to succeed. I had the attitude that nothing was going to stand in the way of getting my degree. In my first year in college I took an Introduction to Sociology class that genuinely interested me. It was easy to be passionate about it because

I really liked the subject matter, my professor, and the textbook. I also took Microeconomics. And while I understood its value and importance, I was not as interested in attending and completing the assignments. However, I always knew I needed to find passion in the course if I wanted to be successful and accomplish my goals. One strategy that worked for me was to find situations where I could apply concepts in those less interesting classes to my personal life. For instance, if the lecture and textbook were explaining a Microeconomics concept like total and marginal utility, I would try to apply this to something I could easily relate to. If utility is the satisfaction of the consumption of a product for a consumer, I would think of an example involving Arby's roast beef sandwiches, and blue raspberry slurpees. Making the material meaningful to me allowed me to be passionate about learning something I otherwise would not have been.

“Brick walls are there for a reason: they let us prove how badly we want things.”

– Randy Pausch

There were other activities I enjoyed more than class, but I knew it was important to find a passion for my classes because it was the key to succeeding in them.

It is common to have other things you would like to do more than sitting in class, doing homework and preparing for exams. But you

still must have passion for the learning and for the class in order to be successful.

My favorite definition of success is from John Wooden: "Success is peace of mind which is a direct result of self-satisfaction in knowing you did your best to become the best you are capable of becoming."

Why Are You Here?

Please note: It is OK to not know what your goal is when you start college. In fact, it is extremely common for students not to know what their goal is or what their major is when they begin college, but there is value in identifying your goal(s) as soon as possible.

More questions to ask yourself: Why are you in college, and why are you taking the courses you're taking? If you can answer these questions with solid logic and understand their purpose and how they fit in to being important to your life, you are off to a great start. However, if you are taking classes at someone else's suggestion and you are not genuinely interested in them, you may want to reconsider. I do not wish it to be misconstrued that I recommend you drop out of college, rather I want you to have a plan and passion to be able to achieve your goals. For many people, higher education is a necessary part of their goals.

I see many students in my counseling office who want to be independent, work a full time job, and/or party (rather than go to college). I also see many students who come back a few years later with a renewed passion and value for their education.

For college success, you must attend when the time is right for you. How do you know if it's the right time? Ask yourself if it's the right time for the following students to go to college:

- Monica's goal is to go to a university. She was accepted but couldn't afford it. She enrolls at a community college. She is passionate about attending community college and then transferring to earn a bachelor's degree.
- Christina is a high school graduate. She would like to take a year off of school to work and travel. Her parents gave her an ultimatum, saying that if she wanted to continue to live at home, she had to go to college full-time.
- Javier completed one year of college then got married in his early 20s. He and his spouse raised four children and he has been working for 20 years in an uninteresting, low-paying job. He always wanted to finish college and now finally has the time to go back to school.
- Andy is interested in partying and little else. He knows his college education is important but it is a low priority at this point.

Intrinsic vs. Extrinsic Passion

Sometimes we are motivated by a specific desired outcome of performing a task. Some people play a game because they want to win. In education, some students work hard because they want to receive a good grade or transfer to a prestigious university. Parents of younger children may give a monetary reward for each "A" their student earns. This is extrinsic motivation.

Interest, desire to learn, and enjoyment of a subject are characteristics of intrinsic motivation, or what we call passion. Passion for your education must come from within. If your educational goals (passing a college course, acquiring new skills or attaining a degree) are important enough to you, your motivation can become intrinsic, allowing you to find passion, which will help

you reach your goals. Without passion, you may find yourself struggling, withdrawing from courses, earning poor grades, or dropping out. External rewards of ascending to a certain academic level or acquiring wealth, lose some of their appeal if students do not find the work to get there personally rewarding. These students, who truly embrace their work, are intrinsically motivated – passionate while those who are focused mainly on rewards for high achievement and punishment for poor performance are extrinsically motivated. Trophies, medals, money, new clothes or a new car are examples of extrinsic motivators. One could argue, “the end justifies the means”—that it doesn’t matter if a students’ passion comes internally or externally, as long as they accomplish their goals. However, when the reward is learning itself, the student is on road to long-term success!

“Only passions, great passions, can elevate the soul to great things.”

– Denis Diderot

The Choice Is Yours

I believe one of the best decisions you can make is to attend college if you are passionate about it and it is the right time for you. On the other hand it is better to postpone attending college if you are not passionate about it or feel the time is not right. Please do not misunderstand – I am not discouraging anyone from going to college nor am I encouraging anyone to drop out of college. And I do not expect you to be passionate about every aspect of college. There

were some classes and some requirements that I disliked during my own college experience. My concern, however, is students who start college and are not passionate about it. After a few years and a poor transcript, they meet with a counselor saying they weren't in college for the right reasons, weren't serious about their education, didn't know what they were doing, or... "my parents made me go." There are some suggestions in this book that can assist a passionate student to succeed. But all of the suggestions in the world will not help a student lacking passion. In the end, I want you to be successful and I want you to enjoy college, but I believe these are nearly impossible without passion.

*"Nothing great in the world has ever been accomplished
without passion."*

– Georg Wilhelm Friedrich Hegel

There is a scene from the movie *Serendipity* where Dean's character says, "You know the Greeks didn't write obituaries. They only asked one question after a man died: 'Did he have passion?'" I will leave it up to you to decide if this is true or if it is Hollywood taking a liberty, but either way that quote has stayed with me. You can be successful in college. This textbook is a journey in figuring out how you are going to get there.

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Blueprint for Success in College: Indispensable Study
Skills and Time Management Strategies (by Dave Dillon).
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2. What's College For?

ALISE LAMOREAUX, DAVE DILLON

*“Learning is a treasure that will follow
its owner everywhere.”*

— Chinese Proverb

What's college for? That's a little question with a big answer! A college education comes in many shapes and sizes. In 2020, according to the National Center for Education Statistics, there were 3,982 degree-granting postsecondary institutions in the United States¹

Associate degrees may be obtained at a community colleges or technical schools and usually require approximately 60 credits. Bachelor's degrees are most often offered by four-year colleges or universities, although some community colleges may offer bachelor's degrees. Most bachelor's degrees will require the completion of approximately 120 credits. Some students may begin at a community college and transfer to a four-year college or university to pursue a bachelor's degree while others may start and finish at a four-year college or university. Both associate degrees

1. <https://www.usnews.com/education/best-colleges/articles/how-many-universities-are-in-the-us-and-why-that-number-is-changing>

and bachelor's degrees usually require general education courses and courses focusing on a specific major. A master's degree is an advanced graduate degree that shows a high level of mastery concentrated in a specific subject area. Many master's degree programs require completion of 30 and 60 credits. One distinction between colleges and universities is that colleges do not offer graduate degree programs while universities offer both undergraduate (associate and bachelor's) and graduate degree (master's and doctorate) programs. A doctorate degree is the highest degree available to earn in many fields. Also called a "terminal degree," this signals achieving the highest level of academic mastery in some disciplines.

Colleges and universities may be public, private, religious, small, large, for-profit, community colleges, junior colleges, regional universities, research universities, or international universities. In addition to a degree and an "education," students often pursue college for options, opportunities, knowledge, curiosity, and guidance.

How do you view college? What will define college success for you?

People go to college for a variety of reasons. The type of college you select will help set parameters and expectations for your experiences. Before jumping into the details of going to college, it's important to stop and think about the purpose college has in your life. Traditionally, college was a place young adults went after high school to explore courses and majors before settling into a job path. According to a 2015 University of California at Los Angeles survey, most people currently go to college for one or more of 7

main reasons:²Kevin Eagan et al., [*The American Freshman: National Norms Fall 2015*](#) (Los Angeles: Higher Education Research Institute, UCLA, 2015).

- 1) To be able to get a better job
- 2) To gain a general education and appreciation of ideas
- 3) To become a more cultured person
- 4) To be able to make more money
- 5) To learn more about things that interest me
- 6) To get training for a specific career
- 7) To prepare for graduate or professional school

Video: Don't Just Follow Your Passion: A Talk for Generation Y, Eunice Hii at TEDxTerryTalks 2012



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=23#oembed-1>

What impression does this TED Talk leave you with? Which generation are you?

A Forbes article from 2019 says that the most commonly cited reason for [why Americans value higher education](#) is to get a good job.³ In the past, learning about things that interested them was listed as the top reason to attend college. When did the change in

2. <https://www.heri.ucla.edu/monographs/TheAmericanFreshman2015.pdf>
3. <https://www.forbes.com/sites/brandonbusteed/2019/04/10/whats-the-purpose-of-college/?sh=73adee94354e>

priority occur? Dan Berrett says the change in priority can be linked to Ronald Reagan, when he was Governor of California.⁴

Economic times were tough in 1967 for California. Everyone needed to “tighten their belts.” At that time, California was known for its excellent higher educational system. In a speech Reagan gave on Feb. 28, 1967, a month into his term as Governor, Reagan assured people that he wouldn’t do anything to harm the quality of their public education system. “But,” he added, “We do believe that there are certain intellectual luxuries that perhaps we could do without.” Taxpayers should not be “subsidizing intellectual curiosity,” he said. By the time Reagan won the presidency, in 1980, practical degrees had become the popular choice. In the 1930s, around the time Reagan went to college, about 8% of students majored in “business and commerce.” When he was elected Governor, that share was 12%. By the time he moved into the White House, more students majored in business than anything else. Business, as a major, has held that top spot ever since.

What frames your value of education? What kind of return on your investment do you expect from college?

Deciding to go to college has an “**opportunity cost**.” An opportunity cost is based on the economic principle that there are limited resources available and choices must be made. Examples of resources would be things like time and money. If you are spending time doing something, you must give up doing something else you

4. <https://www.wpr.org/reagans-1967-speech-changed-purpose-college-forever-says-journalist>

want to do. That is the opportunity cost of your choice. Going to college will have an opportunity cost in your life. An important question to ask in the beginning of your college venture is: what are you willing to trade off for going to college?

Opportunity costs are tied to the idea of return on investment. Once you make an investment of your time and money in college, what investment are you hoping to get in return? How you define success in relationship to your college experience impacts how you see the concept of return on investment. Some ways to gauge return on investment include: job opportunities after college, immediate financial benefit to earned wages, social network/connections made while attending college, development of communication and other “soft skills,” personal enrichment and/or happiness, and the ability to improve socio-economic circumstances for students’ family and community.

Short-term rewards compared to long-term rewards are another way to look at return on investment. For example, it takes much longer to become a CEO (Chief Executive Officer) of a company than it does to get a well-paid job at the same company. Different skills would be required from the CEO and it may require more investment to acquire those skills. Frances Bronet, the Dean of the School of Architecture at the University of Oregon, conducted a [survey of former engineering graduates](#) when she taught at Rensselaer Polytechnic Institute. She asked former graduates what they felt they had missed in their education. The results were very different depending on how recent their graduation was. Students who had graduated 1 year ago felt that they needed more technical skills. People who had graduated 5 years ago felt that they needed more management skills, and people who had graduated 10–20 years ago felt that they needed more cultural literacy because their work now involved more working with other cultures.

Deciding to go to college is a big decision and choosing a course of study can seem overwhelming to many students. Considering the changing world we live in, knowing what direction to go is not easy.

In the most watched TED talk of all time, educationalist Sir Ken

Robinson claimed that “schools kill creativity”, arguing that we grow out of creativity rather than growing into it. Robinson also argues that “creativity is as important as literacy and we should afford it the same status.”

Video: Do Schools Kill Creativity? Ken Robinson at TED 2006



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=23#oembed-2>

What do you think the purpose of college is? Do you think schools “kill” creativity?

Asking yourself the questions below may help you add more depth to your foundation for the purpose for you for college. It is OK if you don’t have answers for some of the questions. You may want to discuss some the questions, your answers, and your goals with a counselor or advisor.

Personal Inventory Questions

1. Why are you here?
2. Why college, why now?
3. How do you define college?
4. What do you imagine college life to be like?
5. How do you know when you are ready for college?
6. What have you done to prepare for college?
7. What do you think college expects from students?
8. What does going to college mean for your future?
9. Using the list of 7 reasons students attend college provided in

this chapter, rank your reasons for going to college.

10. In your opinion, is it a good idea for academic counselors to steer high school kids towards either a 4-year degree or vocational training?
11. Should students be steered towards careers that would be a good “fit” for them?
12. Opportunity Cost Analysis: Create a pie chart identifying how you currently spend your time (daily/weekly).

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Lamoreaux, Alise. *A Different Road To College: A Guide For Transitioning To College For Non-traditional Students*. Open Oregon Educational Resources, 2018.
<https://openoregon.pressbooks.pub/collegetransition/chapter/chapter-1/> License: CC BY: Attribution.

Adaptions: Reformatted. Added learning objectives.
Modified reasons for going to college. Updated sources.

Robinson, Ken. “Do Schools Kill Creativity?” TED, TED Conferences LLC, Feb. 2006. https://www.ted.com/talks/ken_robinson_says_schools_kill_creativity

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Hii, Eunice. “Don’t Just Follow Your Passion: A Talk for

Generation Y” TEDxTerryTalks. University of British Columbia, November 3rd, 2012, Vancouver, BC, Canada. <https://youtu.be/sgbzbdxTm4E>. License: All Rights Reserved. License Terms: Standard YouTube license.

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3. Discovering Your Ikigai: Finding Purpose in College and Career

JOEL GLADD

Finding your purpose can feel maddeningly elusive. The Japanese concept of Ikigai—literally “a reason for being”—offers a surprisingly pragmatic framework for navigating these waters, especially when facing pivotal life decisions about education and career.

Think of Ikigai as an elegant algorithm for human fulfillment, operating at the intersection of four crucial variables: what you love, what you're good at, what the world needs, and what you can be paid for. These elements must work in concert to produce optimal output—in this case, a life worth living.

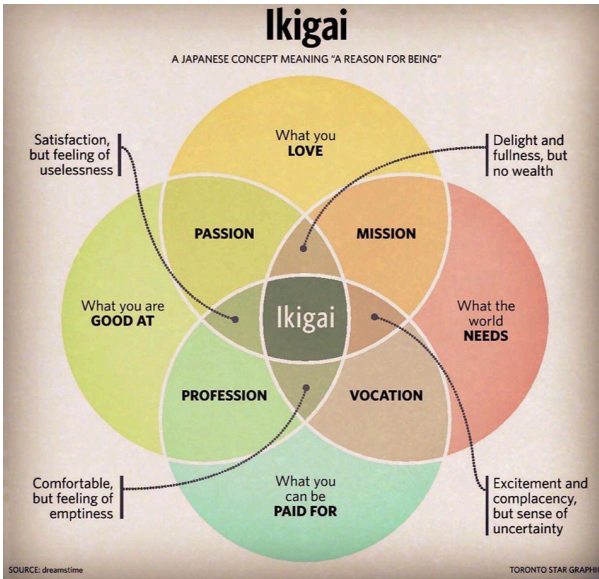


Figure. This diagram illustrates the concept of Ikigai, a Japanese framework for finding purpose by combining what you love, what you are good at, what the world needs, and what you can be paid for. The overlapping areas help identify passions, missions, vocations, and professions, ultimately guiding you towards a fulfilling life.

What is Ikigai?

Ikigai solves what we might call a complex optimization problem with four key constraints:

- **Doing What You're Good At:** Your innate and developed capabilities
- **Doing What You Love:** Activities that trigger flow states
- **Doing What the World Needs:** Societal pain points you can address
- **Doing What You Can Get Paid For:** Economic sustainability of

your solution

When these elements align, they create what psychologists call “eudaimonic well-being”—the kind of deep satisfaction that transcends mere happiness.

1. Doing What You Are Good At

The first dimension of Ikigai is finding what you're good at. We all have things we're good at—whether we picked them up along the way or they just came naturally, like a mechanic's knack for diagnosing engine troubles. The trick is zeroing in on your personal strengths and making them work for you.

How do you figure this out if you haven't been tinkering with engines for years or if there's no equivalent for you? Think about it like a detective gathering evidence. Start by taking a personality and skills assessment; they're not perfect, but they can point you in the right direction. Then do some field research—ask people who know you well what they think you excel at. Your friends, family, and teachers often spot talents you might overlook, like how you always seem to know just what to say when someone's having a rough day. Ask your teachers and college faculty for feedback.

You can also be your own investigator. Think back to times when everything just clicked. Maybe it was explaining a tough concept to classmates, organizing a community event, or solving a tricky problem at your part-time job. These moments are clues pointing toward your natural abilities. Once you've gathered all this intel, you'll have a clearer picture of your strengths and can start plotting a career path that plays to them.

Identifying your strengths is about understanding your unique edge in the workforce. It's key to your value proposition.

Maria discovers her talent

Maria's working toward her Associate's degree in Education at the College of Western Idaho. Like many students, she wasn't always sure what made her stand out. Through a skills assessment, Maria discovered something valuable about herself: she has a gift for taking complicated ideas and making them crystal clear to others. It's like she can translate "technical speak" into everyday language that anyone can understand.

This discovery led Maria to explore teaching roles at different levels. She learned that instructional designers—the folks who develop training materials and online courses for businesses and schools—often start exactly where she is now. They need the same skills she's building: breaking down complex information, creating clear explanations, and helping others learn effectively. Even better, she found out that instructional designers in Idaho typically earn the salary she's looking for, with lots of opportunities to work remotely.

Instead of burning energy trying to become great at everything within education (which is about as practical as trying to be a master of every trade), Maria doubled down on her natural talent. She started volunteering as a peer tutor in the college's learning center, where she helps other students understand tough concepts in subjects like biology and psychology. She's also taking an elective in digital media to learn how to create engaging visual presentations—a key skill for modern educational careers.

2. Doing What You Love

Think of “doing what you love” like finding your favorite radio station: when you hit the right frequency, everything clicks. It’s about discovering activities that grab your attention so completely that you lose track of time, like when you’re so focused on fixing an engine that you forget to eat lunch. It’s the kind of activity psychologists refer to as “flow”.

Maybe you’re the person who can’t stop tinkering with computers, taking things apart to see how they work. Or perhaps you’re happiest when helping your cousin figure out why their car is making that weird noise. These natural inclinations are like compass needles pointing toward potentially satisfying careers.

Say you’re fascinated by motors and machines. This could lead you to careers ranging from diesel mechanics to industrial robotics, fields with strong job markets in our area. The key is to be strategic. Sure you might love playing video games, but instead of dreaming about being a professional gamer, begin translating how that interest connects to real job opportunities and not just convenient slots in your dreamscape. Your understanding of game mechanics could mean you’re interested in UX design, or your experience managing online gaming teams (yes those are actual skills!) could mean you enjoy management positions more generally.

When you combine what you’re good at with what you love, you find your passion. For instance, Maria loves explaining complex ideas, and she’s also really good at it. This overlap gives her a sense of passion for designing learning experiences that help others understand challenging subjects. Passion is that feeling

of enthusiasm and excitement that arises when you do something you love *and* are skilled at. This passion can be a key ingredient in helping you stay motivated and engaged as you pursue your career goals—BUT passion alone doesn't far enough. Focusing on your passion at the expense of other considerations can lead to feelings of uselessness and isolation.



Figure. This portion of the Ikigai diagram highlights how the overlap of 'What you love' and 'What you are good at' results in 'Passion.' However, without considering other aspects like the world's needs or financial compensation, this passion may lead to satisfaction but also a sense of uselessness.

3. Doing What the World Needs

The third dimension of Ikigai involves understanding how you can contribute to society. Contributing to society means finding a way to make a positive impact on the world around you. This is different from simply exploring a passion because it involves considering how your skills and interests can help solve real-world problems and meet community needs.

For example, while you might be passionate about art, contributing to society could mean using your artistic skills to create educational murals, promote local culture, or support mental health initiatives through creative workshops. It's about aligning your passion with a purpose that benefits others and creates a broader sense of fulfillment. There are many different ways to do this! The Treasure Valley needs people who can fill all kinds of roles—teachers, healthcare workers, business leaders, social workers, skilled tradespeople, and more. Consider what problems you see in your community and how you might help solve them.

When you combine what you love with what the world needs, you create a mission. A mission is about aligning your passions with the needs of others, allowing you to make a meaningful impact on the world. Maria loves teaching and helping others and recognizes that the community has a need for accessible education. By focusing on this overlap, Maria has found a *mission* in making education exciting for everyone. However, your mission alone often isn't enough. There are many pursuits that feel meaningful and even noble but don't provide enough income to live a flourishing life.



This section of the Ikigai model shows the overlap between 'What you love' and 'What the world needs,' resulting in a 'Mission.' A mission can bring delight and a sense of fulfillment, but without financial compensation, it may be difficult to sustain long-term.

4. Doing What You Can Be Paid For

Passion won't keep your refrigerator stocked or your car running. Pursuing a mission can feel noble but unsustainable if it doesn't provide the right income. Finding work that pays the bills isn't just practical—it's essential for building a stable life. Think of it like

building a house: your interests and skills are the blueprint, but a steady paycheck is the foundation that keeps everything from toppling over.

The sweet spot lies in finding work that both feeds your bank account and doesn't drain your soul. Take Jordan, a former CWI student who loved working outdoors. Instead of pursuing a low-paying job as a hiking guide, he leveraged his passion into a career as a land surveyor. Now he spends his days outside while earning solid money helping construction projects and property developers.

The Treasure Valley's job market offers some surprisingly lucrative paths that might not be on your radar. Everyone knows about the tech boom bringing software jobs to Boise, but did you know that skilled welders in our area often out-earn many college graduates? Or that medical lab technicians can earn a decent salary with just a two-year degree? The key is understanding where the money actually flows in our local economy, not where you wish it would.

This isn't about chasing the biggest paycheck—it's about finding sustainable work that can support the life you want to build.

When exploring career options, get granular about the numbers. Research actual starting salaries in our region (not national averages), factor in the cost of training or education, and consider growth potential. The [Idaho Department of Labor's website](#) lists median wages for hundreds of occupations right here in our are. Use it. Our [Work-Based Learning Center](#) can offer more personalized guidance.

When you combine what you can be paid for with what the world needs, you create a vocation. A vocation is a career or occupation that meets a genuine demand in society while also providing financial stability. For

example, Maria identified that her skills in teaching and communication are in demand, and she realized she could be paid for these skills by pursuing a career in education. Unlike a passion or mission, a vocation centers on practical contributions that also meet economic needs.



Figure. This section of the Ikigai model illustrates the overlap between 'What the world needs' and 'What you can be paid for,' resulting in 'Vocation.' A vocation can provide excitement and meet societal needs, but without a personal connection or passion, it may lead to a sense of uncertainty.

When you combine what you're good at with what you can be paid for, you create a profession. It's like discovering that your knack for untangling complex problems matches perfectly with a career in IT support that actually pays the bills. Think of a profession as the sweet spot where your talents meet the market's demands, creating a reliable path to earning a living.

Take Maria's situation: she's got a natural gift for breaking down tough concepts into bite-sized pieces that anyone can understand. Instead of letting that talent collect dust, she's channeling it into a career in education where schools actively hire and pay for exactly this skill. It's like she's discovered that her superpower has a price tag attached—in a good way.

But here's the thing about professions: they don't always set your heart on fire with passion or give you that deep sense of changing the world. Sometimes they're more like a well-oiled machine that converts your abilities into a steady paycheck. You might be really good at data analysis and find stable, well-paying work doing it, even if spreadsheets don't make your soul sing.



Figure. This segment of the Ikigai model illustrates the overlap between 'What you are good at' and 'What you can be paid for,' resulting in a 'Profession.' While a profession can offer comfort and financial stability, without passion or a deeper sense of purpose, it can often lead to a feeling of emptiness.

Having a vocation and profession ensures your career path is sustainable over the long term; however, without being grounded in the other Ikigai categories—your passion and mission—you may find yourself feeling empty or uncertain.

Finding Your Ikigai

Let's return to Maria's story to see how all the pieces of Ikigai can come together to create a fulfilling career path. Remember how she discovered her talent for making complex ideas simple? That was just the first piece of her puzzle.

Through her journey at CWI, Maria found that her natural teaching ability (what she's good at) perfectly matched her love of helping others learn (what she loves). This created her passion. But Maria didn't stop there—she looked deeper. She noticed that local businesses struggled to train their employees effectively, especially with more companies moving to online learning. This need in the community (what the world needs) aligned with her desire to teach, forming her mission.

The final piece clicked when Maria learned that instructional designers—professionals who create learning materials for companies and schools—earn competitive salaries in the Treasure Valley (what you can be paid for). By combining her teaching skills with digital design knowledge from her electives, Maria found a sweet spot where all four elements of Ikigai intersect.

But here's what makes Maria's story really valuable: she didn't just think about these connections, she tested them. She volunteered at the learning center, took that digital media elective, and even created training materials for a local nonprofit. Each experience either confirmed her path or helped her adjust it. When she realized she preferred creating online courses to traditional classroom teaching, she shifted her focus accordingly.

Think of Maria's approach like test-driving different cars before making a purchase. Each experience—whether it was tutoring, creating digital content, or helping organize training programs—gave her practical insights into what worked for her and what didn't. She didn't just dream about her ideal career; she went out and experienced pieces of it firsthand.

Your path might look different from Maria's, but the process

remains the same: 1) identify your strengths, 2) explore what excites you, 3) look for real needs in your community, and 4) find ways to make a living meeting those needs. Use your time at CWI to experiment with different roles through classwork, clubs, internships, and part-time jobs. Each experience brings you closer to finding your own unique intersection of passion, mission, profession, and vocation—your personal Ikigai.

Video: [IKIGAI. A Japanese Philosophy for Finding Purpose](#)



One or more interactive elements has been excluded from this version of the text. You can view them online here:

<https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=333#oembed-1>

Ikigai Practice



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[https://cwi.pressbooks.pub/
pathwaystocollegesuccess/?p=333#h5p-2](https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=333#h5p-2)

PART II

TIME MANAGEMENT

4. Time Management Theory

DAVE DILLON

“You can have it all. Just not all at once.”

– Oprah Winfrey

My favorite aspect of time is its equality. Regardless of our race, ethnicity, religion, gender, or age, all of us have the same amount of time in a day, week, month and year. Wealthy people cannot buy more time and poor people do not receive less time. A minute for a tall person is the same amount of time for a short person. An hour for a woman is the same amount of time for a man. Regardless of how many languages someone speaks, their sexual orientation, ethnicity, educational background, income or experience, we all have 365 days in a year. Some people will live longer than others, but when comparatively measuring how much time humans have with each other, we all have the same amount.

Time is a popular philosophical concept. You may have heard some of the following sayings:

- Time flies when you are having fun
- That is a waste of time
- Time is money
- We have all the time in the world
- That was an untimely death
- The time is right
- I'm having the time of my life
- Time heals all wounds
- We have some time to kill

What do the sayings mean to you?

Time is also how we keep track of when we're supposed to be and where we're supposed to be (work, home, class, meeting friends and family, etc.). Think about how many measures of time you have in your home (clocks, watches, cell phones, TVs, DVRs, computers, microwaves, ovens, thermostats, etc.). It is obvious time is important to us.

Time: A Limited and Precious Commodity

We cannot go back in time. If I used my time poorly last Wednesday, I can do nothing to get it back. Other commodities may allow for accumulating more or starting over, but time does not. We cannot “save” time nor earn more time.

“If you had a bank that credited your account each morning with \$86,400, but carried no balance from day to day and allowed you to keep no cash in your account, and every evening cancelled whatever part of the amount you had failed to use during the day, what would you do? Draw out every cent, of course! Well, you have such a bank, and its name is time. Every morning it credits you with 86,400 seconds. Every night it writes off as lost whatever of these you have failed to invest to good purpose. It carries no balance; it allows no overdrafts. Each day it opens a new account with you. Each night it burns the record of the day. If you fail to use the day's deposit, the loss is yours. There is no going back. There is no drawing against the morrow. You must live in the

*present – on today's deposit. Invest it so as to get the
utmost in health and happiness and success."*

– Anonymous

Technically, time cannot be managed, but we label it time management when we talk about how people use their time. We often bring up efficiency and effectiveness when discussing how people spend their time, but we cannot literally manage time because time cannot be managed. What we can do though, is find better ways to spend our time, allowing us to accomplish our most important tasks and spend time with the people most important to us.

Human babies do not come with instruction manuals. There is nothing to follow to know how we are supposed to spend our time. Most of us spend our time doing a combination of what interests us, what is important to us and what we feel we “have” to do.

What is your relationship with time? Are you usually early, right on time or late? Do you find yourself often saying, “I wish I had more time?” Are you satisfied with your relationship with time or would you like to change it? What are your cultural and family values related to time?



Hop to It!

The Value of Time

It is also important to determine how much your time is worth to you. If someone were to negotiate for an hour of your time, how much would that be worth to you? We often equate time with money. Many of us work in positions where we are paid by the hour; this gives us some gauge of what we are worth to our employers. Some items we purchase because we think they are of good value for their price. Others we pass on. Are some hours of your day more important or more valuable than others? Why? Are you more productive in the morning or in the evening? Once people realize how valuable time is, they often go to great lengths to protect it because they understand its importance. How much would you pay for an additional hour in a day? What would you do with that time? Why?

What is the value of your time? How much is an hour of your time worth? If someone were to pay you \$10 to do a job, how much time would that be worth? \$20? \$50?

How Do I Allocate My Time?

“Lack of direction, not lack of time is the problem. We all have 24 hour days.”

– Zig Ziglar

Most of us know there are 24 hours in a day, but when I ask students how many hours are in a week, many do not know the answer. There are 168 hours in a week (24 hours multiplied by seven days). I don't believe that it is imperative that students know how many hours are in a week, but it helps when we start to look at how much time we have in a week, how we want to spend our time and how we actually spend our time.

One challenge for many students is the transition from the structure of high school to the structure of college. In high school, students spend a large portion of their time in class (approximately 30 hours in class per week), while full-time college students may spend only one-third of that time in class (approximately 12 hours in class per week). Further, college students are assigned much more homework than high school students. Think about how many times one of your high school teachers gave you something to read during class. In college, students are given more material to read with the expectation that it is done outside of class.

This can create challenges for students who are unable to set aside proper study time for each of their courses. Keep in mind for full-time students: your college educational day should not be shorter than your high school day.

Hourly Recommendations (per Week)

Work	Units	Study Time	Total
40	6	12	58
30	9	18	57
20	12	24	56

I use this table frequently in counseling appointments, classes and orientations. It's a guide for students that provides an idea of how much time students spend with work and school, and what experts recommend for a specific amount of work hours that correlates with a specific number of units. I like to ask students how they spend their week. Students always know their work hours and their class times. These are easy to place in a schedule or on a calendar because they are predetermined. But study time is the one area that consistently is left out of a student's schedule. It takes initiative to include it in a student's busy week and self-discipline to stick to it. Here's a tip: Write your study time into your schedule or calendar. It's important to do this because it's easy to skip a study session or say to yourself, "I'll do it later." While there would likely be an immediate consequence if you do not show up for work, there is not one if you fail to study on Tuesday from 3pm-4pm. That consequence may take place later, if the studying is not made up.

It is widely suggested that students need to study approximately two hours for every hour that they spend in class in order to be successful.¹ Thus, if I am taking a class that meets on Mondays and Wednesdays from 4pm-5:30pm (three hours per week), I would want to study outside of class six hours per week. This is designed as a guide and is not an exact science. You might need to spend more time than what is recommended if you are taking a subject you find challenging, have fallen behind in or if you are taking short-term classes. This would certainly be true if I were to take a physics class. Since I find learning physics difficult, I might have to spend three

1. Jeffery Young, "[Homework? What Homework?](https://www.chronicle.com/article/Homework-What-Homework-/2496)," Chronicle of High Education, 2002, A35-A37, <https://www.chronicle.com/article/Homework-What-Homework-/2496>.

or four hours of study time for each hour of class instruction. You also might need to study more than what is recommended if you are looking to achieve better grades. Conversely, you might need to spend less time if the subject comes easy to you (such as sociology does for me) or if there is not a lot of assigned homework.

Keep in mind that 20 hours of work per week is the maximum recommended for full-time students taking 12 semester units in a term. For students working full-time (40 hours a week), no more than six units is recommended. The total is also a very important category. Students often start to see difficulty when their total number of hours between work and school exceeds 60 per week. The amount of sleep decreases, stress increases, grades suffer, job performance decreases and students are often unhappy.

How do you spend your 168 hours in a week?

- Child Care
- Class
- Community Service / Volunteer
- Commuting / Transportation
- Eating / Food Preparation
- Exercise
- Family
- Friends
- Household / Child Care Duties
- Internet / Social Media / Phone / Texting
- Party
- Recreation / Leisure
- Relationship
- Sleeping
- Spirituality / Prayer / Meditation
- Study
- Video Games
- Watching TV or Movies, Netflix, Youtube
- Work / Career

There is also the time it takes for college students to adjust to college culture, college terminology, and college policies. Students may need to learn or relearn how to learn and some students may need to learn what they need to know. What a student in their first college semester needs to know may be different than what a student in their last college semester needs to know. First semester students may be learning where classrooms are, building hours and locations for college resources, and expectations of college students. Students in their last semester may be learning about applying for their degree, how to confirm they have all of their requirements completed for their goal, and commencement information. Whatever it is students may need to learn, it takes time.

Fixed Time vs. Free Time

Sometimes it helps to take a look at your time and divide it into two areas: fixed time and free time. Fixed time is time that you have committed to a certain area. It might be school, work, religion, recreation or family. There is no right or wrong to fixed time and everyone's is different. Some people will naturally have more fixed time than others. Free time is just that—it is free. It can be used however you want to use it; it's time you have available for activities you enjoy. Someone might work 9am-2pm, then have class 3pm-4:30pm, then have dinner with family 5pm-6pm, study 6pm-7pm and then have free time from 7pm-9pm. Take a look at a typical week for yourself. How much fixed time do you have? How much free time? How much fixed and free time would you like to have?

Identifying, Organizing and Prioritizing Goals

The universal challenge of time is that there are more things that we want to do and not enough time to do them.

I talk to students frequently who have aspirations, dreams, goals and things they want to accomplish. Similarly, I ask students to list their interests at the beginning of each of my classes and there is never a shortage of items. But I often talk to students who are discouraged by the length of time it is taking them to complete a goal (completing their education, reaching their career goal, buying a home, getting married, etc.). And every semester there are students that drop classes because they have taken on too much or they are unable to keep up with their class work because they have other commitments and interests. There is nothing wrong with other commitments or interests. On the contrary, they may bring joy and fulfillment, but do they get in the way of your educational goal(s)? For instance, if you were to drop a class because you required surgery, needed to take care of a sick family member or your boss increased your work hours, those may be important and valid reasons to do so. If you were to drop a class because you wanted to binge watch a Netflix series, or spend more time on TikTok, Facebook, Twitter, or Instagram, you may have more difficulty justifying that decision, but it is still your decision to make. Sometimes students do not realize the power they have over the decisions they make and how those decisions can affect their ability to accomplish the goals they set for themselves.

I am no exception. I have a long list of things that I want to accomplish today, tomorrow, next week, next month, next year and in my lifetime. I have many more things on my list to complete than the time that I will be alive.

Identifying Goals

Recently, there has been a lot of attention given to the importance of college students identifying their educational objective and their major as soon as possible. Some high schools are working with students to identify these goals earlier. If you are interested in career identification, you may wish to look into a career decision making course offered by your college. You may also wish to make an appointment with a counselor, and/or visit your college's Career Center and/or find a career advice book such as *What Color is Your Parachute?* by Richard N. Bolles.

Goal identification is a way to allow us to keep track of what we would like to accomplish as well as a mechanism to measure how successful we are at achieving our goals. This video gives modern practical advice about the future career market.

Video: *Success in the New Economy*, Kevin Fleming and Brian Y. Marsh, Citrus College:



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Educational Planning

There has also been focused attention on the importance of educational planning.

Education plans developed with a counselor help students determine and explore a program of study and have proven to facilitate student success.²

Students can follow educational plans like a road map so they can see how to complete required classes in the most efficient and logical order based on their educational goals.

Educational planning may appear to be simple: identifying the program of study and then figuring out which courses are required to complete it.



Graphics courtesy of Greg Stoup, Rob Johnstone, and Priyadarshini Chaplot of The RP Group

However, it can often be extremely complex. Many students have

2. [“Advancing Student Success in the California Community Colleges,”](http://www.californiacommunitycolleges.cccco.edu/portals/0/executive/studentsuccesstaskforce/sstf_final_report_1-17-12_print.pdf) California Community Colleges (California Community Colleges Chancellor’s Office: Recommendations of the California Community Colleges Student Success Task Force, 2012), http://www.californiacommunitycolleges.cccco.edu/portals/0/executive/studentsuccesstaskforce/sstf_final_report_1-17-12_print.pdf.

multiple goals. One student might be interested in more than one of these goals: earn multiple degrees, transfer to a four-year college or university, prepare for graduate school, start a minor, or complete requirements for several transfer schools.

Students also have different strengths. Some might be strong in English. Some students excel in math. Others might be strong in science, arts and humanities, or social sciences. Educational planning takes these strengths (and weaknesses) into consideration. Students are encouraged to take English and math early³, as statistics show that those students will be more successful. But the order of courses taken for students with different strengths could vary even if the students have the same goal. There is not a one-size-fits-all solution.

Educational planning may be further complicated by availability of courses a college or university offers, the process in which a student may be able to register for those courses and which sections fit into students' schedules. Transcript evaluations (if students have attended previous colleges or universities), assessment of appropriate English or math levels and prerequisite clearance procedures may also contribute to the challenge of efficient educational planning.

Further, students have different priorities. Some students want to complete their goals in a certain amount of time. Other students may have to work full-time and take fewer units each semester. Educational planning might also consider student interests, skills, values, personality, or student support referrals. Grade point

3. J. Weissman, C. Bulakowski, and M.K. Jumisko, "Using Research to Evaluate Developmental Education Programs and Policies," in *Implementing Effective Policies for Remedial and Developmental Education: New Directions for Community Colleges*, ed. J. M. Ignash (San Francisco: Jossey-Bass, 1997), 100, 73-80.

average requirements for a student's degree, transfer or specific programs are also considered in educational planning.⁴

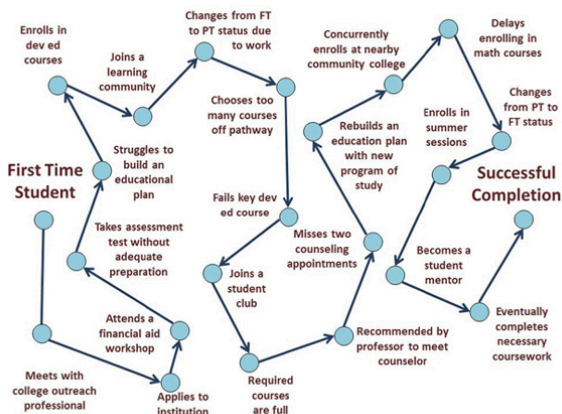
While some students may know what they want to do for their career, and have known since they were five years old, many students are unsure of what they want to do. Often, students aren't sure how to choose their major. A major is an area of concentration in which students will specialize at a college or university. Completing a major requires passing courses in the chosen concentration and degrees are awarded that correlate with students' majors. For instance, my bachelor's degree in Sociology means that my major was Sociology.

It is OK to not know what major you want to pursue when you start college, but I suggest careful research to look into options and narrow them down to a short list of two or three. Talking with a counselor, visiting your college's Career Center, or taking a college success class may help with your decisions.

Seventy percent of students change their major at least once while in college and most will change their major at least three times. It is important for students to find the best major for them, but these changes may make previous educational plans obsolete.

The simple concept and road map often ends up looking more like this:

4. Beth Smith et al., "[The Role of Counseling Faculty and Delivery of Counseling Services in the California Community Colleges.](#)" (California: The Academic Senate for California Community Colleges).



Graphics
courtesy of
Greg Stoup,
Rob
Johnstone,
and
Priyadarshini
Chaplot of
The RP
Group

Due to the complicated nature of educational planning, a counselor can provide great value for students with assistance in creating an educational plan, specifically for each individual student. If you have not done so already, I highly recommend you meet with a counselor and continue to do so on a frequent basis (once per semester if possible).

How To Start Reaching Your Goals

Without goals, we aren't sure what we are trying to accomplish, and there is little way of knowing if we are accomplishing anything. If you already have a goal-setting plan that works well for you, keep it. If you don't have goals, or have difficulty working towards them, I encourage you to try this.

Make a list of all the things you want to accomplish for the next day. Here is a sample to do list:

- Go to grocery store

- Go to class
- Pay bills
- Exercise
- Social media
- Study
- Eat lunch with friend
- Work
- Watch TV
- Text friends

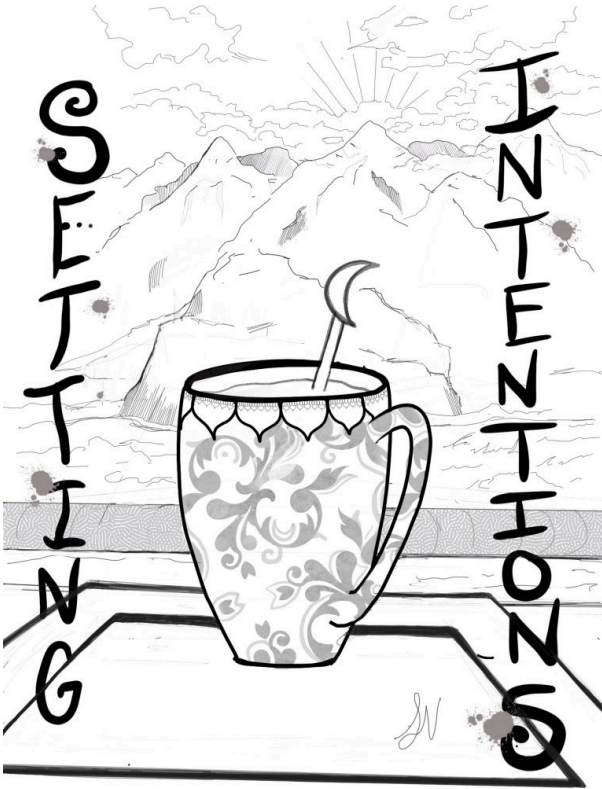
Your list may be similar to this one or it may be completely different. It is yours, so you can make it however you want. Do not be concerned about the length of your list or the number of items on it.

“Obstacles are things a person sees when he takes his eyes off his goal.”

– E. Joseph Cossman

You now have the framework for what you want to accomplish the next day. Hang on to that list. We will use it again.

Now take a look at the upcoming week, the next month and the next year. Make a list of what you would like to accomplish in each of those time frames. If you want to go jet skiing, travel to Europe, or get a bachelor's degree, write it down. Pay attention to detail. The more detail within your goals the better. Ask yourself this question: what is necessary to complete your goals?



With those lists completed, take into consideration how the best goals are created. Commonly called “SMART” goals, it is often helpful to apply criteria to your goals. SMART is an acronym for Specific, Measurable, Attainable, Realistic and Timely. Perform a web search on the Internet to find out more about “SMART” goals. Are your goals SMART goals? For example, a general goal would be, “Achieve an ‘A’ in my anatomy class.” But a more specific, measurable, and timely goal would say, “I will schedule and study for one hour each day at the library from 2pm-3pm for my anatomy class in order to achieve an ‘A’ and help me gain admission to

nursing school.” Whether goals are attainable or realistic may vary from person to person.

Now revise your lists for the things you want to accomplish in the next week, month and year by applying the SMART goal techniques. The best goals are usually created over time and through the process of more than one attempt, so spend some time completing this. Do not expect to have “perfect” goals on your first attempt. Also, keep in mind that your goals do not have to be set in stone. They can change. And since over time things will change around you, your goals should also change.

Another important aspect of goal setting is accountability. Someone could have great intentions and set up SMART goals for all of the things they want to accomplish. But if they don’t work towards those goals and complete them, they likely won’t be successful. It is easy to see if we are accountable in short-term goals. Take the daily to-do list for example. How many of the things that you set out to accomplish, did you accomplish? How many were the most important things on that list? Were you satisfied? Were you successful? Did you learn anything for future planning or time management? Would you do anything differently? The answers to these questions help determine accountability.

Long-term goals are more difficult to create and it is more challenging for us to stay accountable. Think of New Year’s Resolutions. Gyms are packed and mass dieting begins in January. By March, many gyms are empty and diets have failed. Why? Because it is easier to crash diet and exercise regularly for short periods of time than it is to make long-term lifestyle and habitual changes.

Randy Pausch was known for his lecture called “The Last Lecture,” now a bestselling book. Diagnosed with terminal pancreatic cancer, Pausch passes along some of his ideas for best strategies for uses of time in his lesser known lecture on time management. I don’t believe there is someone better suited to teach about time management than someone trying to maximize their last year, months, weeks and days of their life.

Video: *Time Management*, Randy Pausch.



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Organizing Goals

Place all of your goals, plans, projects and ideas in one place. Why? It prevents confusion. We often have more than one thing going on at a time and it may be easy to become distracted and lose sight of one or more of our goals if we cannot easily access them. Create a goal notebook, goal poster, goal computer file—organize it any way you want—just make sure it is organized and that your goals stay in one place.

Author's Story

I learned this lesson the hard way. Some years ago, I used sticky notes all the time. I think they are a great invention and believe they help me stay organized. But one day when I was looking for a phone number I realized that I had sticky notes at work, sticky notes at home and sticky notes in my car. I had so many sticky notes in multiple places that I couldn't easily find the information I needed. Everyone has

a preference of how clean or messy his or her work area is, but if you're spending time looking for things, it is not the best use of your time. I now keep all of my sticky notes in one place. Further, I always use one and only one point of entry for anything that goes on my calendar. I have also found many advances in technology to assist with organization of information. But I still use physical sticky notes.

Use Technology to your Advantage

Software and apps are now available to help with organization and productivity. Check out Evernote, One Note, or Stickies.

Break Goals into Small Steps

I ask this question of students in my classes: If we decided today that our goal was to run a marathon and then went out tomorrow and tried to run one, what would happen? Students respond with: (jokingly) “I would die,” or “I couldn’t do it.” How come? Because we might need training, running shoes, support, knowledge, experience and confidence—often this cannot be done overnight. An academic goal might be obtaining an A grade on a mid-term essay for a writing class. Small steps might include getting started, planning time for smaller tasks, researching, writing a draft, visiting a writing support service, having a friend proofread, revising. Instead of giving up and thinking it’s impossible because the task is too big for which to prepare, it’s important to develop smaller steps or tasks that can be

started and worked on immediately. Once all of the small steps are completed, you'll be on your way to accomplishing your big goals.

What steps would you need to complete the following big goals?

- Buying a house
- Finding a long term partner
- Attaining a bachelor's degree
- Destroying the Death Star

Prioritizing Goals

Why is it important to prioritize? Let's look back at the sample list. If I spent all my time completing the first seven things on the list, but the last three were the most important, then I would not have prioritized very well.

It would have been better to prioritize the list after creating it and then work on the items that are most important first. You might be surprised at how many students fail to prioritize.

After prioritizing, the sample list now looks like this:

- Go to class
- Work
- Study
- Pay bills
- Exercise
- Eat lunch with friend
- Go to grocery store
- Text friends
- Social media
- Watch TV

One way to prioritize is to give each task a value. A = Task related to goals; B = Important—Have to do; C = Could postpone. Then, map

out your day so that with the time available to you, work on your A goals first. You'll now see below our list has the ABC labels. You will also notice a few items have changed positions based on their label. Keep in mind that different people will label things different ways because we all have different goals and different things that are important to us. There is no right or wrong here, but it is paramount to know what is important to you, and to know how you will spend the majority of your time with the things that are the most important to you.

A Go to class

A Study

A Exercise

B Work

B Pay bills

B Go to grocery store

C Eat lunch with friend

C Text friends

C Social media

C Watch TV

Do the Most Important Things First

You do not have to be a scientist to realize that spending your time on “C” tasks instead of “A” tasks won’t allow you to complete your goals. The easiest things to do and the ones that take the least amount of time are often what people do first. Checking Facebook or texting might only take a few minutes but doing it prior to studying means we’re spending time with a “C” activity before an “A” activity.

People like to check things off that they have done. It feels good. But don’t confuse productivity with accomplishment of tasks that aren’t important. You could have a long list of things that you

completed, but if they aren't important to you, it probably wasn't the best use of your time.

Perform an internet search for "Time Management Matrix Images." The matrix (also referred to in the Randy Pausch video), shows how to categorize your tasks and will help prioritize your goals, tasks, and assignments. Take a look at the matrix and quadrants and identify which quadrant your activities would fall into.

Quadrant I (The quadrant of necessity): Important and Urgent

Only crisis activities should be here. If you have included exams and papers here, you are probably not allowing yourself enough time to fully prepare. If you continue at this pace you could burn out!

Quadrant II (The quadrant of quality and personal leadership): Important and Not Urgent

This is where you define your priorities. What's important in your life? What will keep you balanced? For example, you may know that good nutrition, sleep, recreation and maintaining healthy social relationships are important but do you consciously make time for them in your daily or weekly routine? This may be where school fits. Where would time for class, homework, study time, required reading, preparing for exams fit in your overall priorities? Quadrant II includes your "A" goals. Managing your life and the lifestyle will help you manage your time.

Quadrant III (The quadrant of deception): Not Important and Urgent

While you may feel that activities, such as texting, need your attention right away, too much time spent on Quadrant III activities can seriously reduce valuable study time. This may leave you feeling pulled in too many directions at once.

Quadrant IV (The quadrant of waste): Not Important and Not Urgent

Quadrants three and four include your "C" goals. If you're spending many hours on Quadrant IV activities, you're either having a great deal of fun or spending a lot of time procrastinating!

Remember, the objective is balance. You may notice I placed social media and texting into this category. You could make a case that social media, texting, Netflix, and Youtube are important, but how often are they urgent? Ultimately, it is up to you to decide what is important and urgent for yourself, but for the context of this textbook, your classes, assignments, preparation, and studying should almost universally be more urgent and important than social media and texting.

Here is an adapted version of the matrix, with an emphasis on quadrant II.

	Urgent	Not Urgent
Important	<div>Crying baby</div> <div>Kitchen fire</div> <div>Some calls</div> <div>1</div>	<div>Exercise</div> <div>Vocation</div> <div>Planning</div> <div>2</div>
Not Important	<div>3</div> <div>Interruptions</div> <div>Distractions</div> <div>Other calls</div>	<div>4</div> <div>Trivia</div> <div>Busy work</div> <div>Time wasters</div>

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Conclusion

Managing time well comes down to two things. One is identifying (and then prioritizing) goals and the other is having the discipline to be able to work towards accomplishing them. We all have the same

amount of time in a day, week, month and year, yet some people are able to accomplish more than others. Why is this? Often, it is because they are able to set goals, prioritize them and then work on them relentlessly and effectively until they are complete.

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5. SMART Goals and Gantt Charts

Motivation often means the difference between success and failure. That applies to school, to specific tasks, and to life in general. One of the most effective ways to keep motivated is to set goals.

Goals can be big or small. A goal can range from *I am going to write one extra page tonight*, to *I am going to work to get an A in this course*, all the way to *I am going to graduate in the top of my class so I can start my career with a really good position*. The great thing about goals is that they can include and influence a number of other things that all work toward a much bigger picture. For example, if your goal is to get an A in a certain course, all the reading, studying, and every assignment you do for that course contributes to the larger goal. You have motivation to do each of those things and to do them well.

Setting goals is something that is frequently talked about, but it is often treated as something abstract. Like time management, goal setting is best done with careful thought and planning. This next section will explain how you can apply tested techniques to goal setting and what the benefits of each can be.

Set Goals That Motivate You

The first thing to know about goal setting is that a goal is a specific end result you desire. If the goal is not something you are really interested in, there is little motivational drive to achieve it. Think back to when you were much younger and some well-meaning adult set a goal for you—something that didn't really appeal to you at all. How motivated were you to achieve the goal? More than likely, if you were successful at all in meeting the goal, it was because you

were motivated by earning the approval of someone or receiving a possible reward, or you were concerned with avoiding something adverse that might happen if you did not do what you were told. From an honest perspective in that situation, your real goal was based on something else, not the meeting of the goal set for you. To get the most from the goals you set, make sure they are things that you are interested in achieving.

That is not to say you shouldn't set goals that are supported by other motivations (e.g., If I finish studying by Friday, I can go out on Saturday), but the idea is to be intellectually honest with your goals.

Set SMART Goals

Goals should also be SMART. In this case, the word *smart* is not only a clever description of the type of goal, but it is also an acronym that stands for Specific, Measurable, Attainable, Relevant, and Time-bound. The reason these are all desirable traits for your goals is because they not only help you plan how to meet the goal, but they can also contribute to your decision-making processes during the planning stage.

What does it mean to create SMART goals?

- **Specific**—For a goal to be specific, it must be defined enough to actually determine the goal. A goal of *get a good job when I graduate* is too general. It doesn't define what a good job is. In fact, it doesn't even necessarily include a job in your chosen profession. A more specific goal would be something like *be hired as a nurse in a place of employment where it is enjoyable to work and that has room for promotion*.
- **Measurable**—The concept of *measurable* is one that is often overlooked when setting goals. What this means is that the goal should have clearly defined outcomes that are detailed enough to measure and can be used for planning of how you

will achieve the goal. For example, setting a goal of *doing well in school* is a bit undefined, but making a goal of *graduating with a GPA above 3.0* is measurable and something you can work with. If your goal is measurable, you can know ahead of time how many points you will have to earn on a specific assignment to stay in that range or how many points you will need to make up in the next assignment if you do not do as well as you planned.

- **Attainable**—*Attainable* or *achievable* goals means they are reasonable and within your ability to accomplish. While a goal of *make an extra one million dollars by the end of the week* is something that would be nice to achieve, the odds that you could make that happen in a single week are not very realistic.
- **Relevant**—For goal setting, *relevant* means it applies to the situation. In relation to college, a goal of *getting a horse to ride* is not very relevant, but *getting dependable transportation* is something that would contribute to your success in school.
- **Time-bound**—Time-bound means you set a specific time frame to achieve the goal. *I will get my paper written by Wednesday* is time-bound. You know when you have to meet the goal. *I will get my paper written sometime soon* does not help you plan how and when you will accomplish the goal.

In the following table you can see some examples of goals that do and do not follow the SMART system. As you read each one, think about what elements make them SMART or how you might change those that are not.

Goal	Is it SMART?	
I am going to be rich someday.	No	There is nothing really specific, measurable, or time-bound in this goal.
I will graduate with my degree, on time.	Yes	The statement calls out specific, measureable, and time-bound details. The other attributes of attainable and relevant are implied.
I am going to save enough money to buy a newer car by June.	Yes	All SMART attributes are covered in this goal.
I would like to do well in all my courses next semester.	No	While this is clearly time-bound and meets most of the SMART goal attributes, it is not specific or measurable without defining what “do well” means.
I am going to start being a nicer person.	No	While most of the SMART attributes are implied, there is nothing really measurable in this goal.
I will earn at least a 3.0 GPA in all my courses next semester.	Yes	All of the SMART attributes are present in this goal.
I am going to start being more organized.	No	While most of the SMART attributes are implied, there is nothing really measurable in this goal.

Table 3.6

APPLICATION

Try writing two SMART goals—something with a one-week time frame and something that you will accomplish over the next year. Make certain that you

include all the appropriate elements—Specific, Measurable, Attainable, Relevant, and Time-bound.

Make an Action Plan

Like anything else, making a step-by-step action plan of how you will attain your goals is the best way to make certain you achieve them. It doesn't matter if it is a smaller goal with immediate results (e.g., finish all your homework due by Friday) or something bigger that takes several years to accomplish (graduate with my degree in the proper amount of time).

The planning techniques you use for time management and achieving goals can be similar. In fact, accurate goal setting is very much a part of time management if you treat the completion of each task as a goal.

What follows is an example of a simple action plan that lists the steps for writing a short paper. You can use something like this or modify it in a way that would better suit your own preferences.

Action Plan

Task	Objective	When
Choose topic.	Select something interesting.	Needs to be done by Monday!
Write outline, look for references.	Create structure of paper and outline each part.	Monday, 6:00 p.m.
Research references to support outline, look for good quotes.	Strengthen paper and resources.	Tuesday, 6:00 p.m.
Write paper introduction and first page draft.	Get main ideas and thesis statement down.	Wednesday, 7:00 p.m.
Write second page and closing draft.	Finish main content and tie it all together.	Thursday, 6:00 p.m.
Rewrite and polish final draft.	Clean up for grammar, writing style, and effective communication.	Friday, 5:00 p.m.

Table 3.7

Another useful approach to goal setting is to create SMART goals and then write them down. For most people there is a higher level of commitment when we write something down. If you have your goals written out, you can refer to each component of the SMART acronym and make certain you are on track to achieve it.

SMART Goal Planning with Gantt Charts

In the evolving landscape of project management and personal development, visual tools play a crucial role in helping individuals track and achieve their objectives. One such powerful visual tool is the Gantt chart. Named after its creator, Henry L. Gantt, this chart serves as a timeline that displays tasks or events plotted against the time during which they're expected to be completed.

But why use a Gantt chart in personal development and goal setting? Here's where the brilliance of the chart becomes evident:

1. **Visibility:** It gives you a clear snapshot of your progress. By setting milestones and tracking them over time, you're able to visually ascertain how you're doing, what's left to be done, and if you're on track.
2. **Accountability:** Seeing tasks and deadlines laid out visually can enhance motivation and provide a sense of responsibility. This is especially beneficial when you're juggling multiple goals or tasks.
3. **Efficiency:** Gantt charts allow for better resource allocation. In personal development, this could mean deciding where to spend your time and when, ensuring you're not stretching yourself too thin.

Connecting Gantt charts with SMART goal planning amplifies their effectiveness. SMART goals, which emphasize being Specific, Measurable, Achievable, Relevant, and Time-bound, mesh seamlessly with the Gantt chart's structure. The chart's timeline resonates with the 'Time-bound' principle, while the milestones and tasks can be crafted to be Specific, Measurable, and Achievable. Furthermore, by visualizing your goals, you can ensure they remain Relevant to your overarching objectives.

With Gantt charts and similar goal-planning strategies, you merge the clarity of SMART goals with the visual efficacy of the milestone-based chart. By plotting your goals on this chart, you'll not only be solidifying your commitment to them but also setting yourself up with a tangible roadmap for success.

Beyond the immediate academic benefits, Gantt-like charts have found their way into the digital realm, becoming an integral part of modern project management tools. As you progress through college and eventually transition into your chosen profession, it's highly likely you'll encounter these charts again, albeit in a more sophisticated form within software applications. These tools enable teams to coordinate tasks, set timelines, and monitor project progress, all under a single digital roof. Recognizing the importance

of visual timelines, many of these applications have incorporated Gantt-like functionalities to aid in project planning and execution.

Sample Gantt Chart

Below is a sample Gantt Chart that can be adapted by First-Year College Students who are planning around a career goal.

This design provides a more structured and detailed approach, guiding students to think about their development both within and outside of their college experience.

Template: First Half of Year One

Activity/Goal	Specifics	Jan	Feb	Mar	Apr	May	Jun
Long-Term Career Goal	Description of the career goal						
College Milestones							
Milestone 1	Specific task or milestone related to college	[]	[]	[]	[]	[]	[]
Milestone 2	Specific task or milestone related to college	[]	[]	[]	[]	[]	[]
Skills Fostered Outside College							
Skill 1	Specific professional skill practiced outside college setting	[]	[]	[]	[]	[]	[]
Skill 2	Specific professional skill practiced outside college setting	[]	[]	[]	[]	[]	[]
Long-Term Personal Goal	Description of the personal goal						
Personal Milestone 1	Specific task or milestone related to personal goal	[]	[]	[]	[]	[]	[]
Personal Milestone 2	Specific task or milestone related to personal goal	[]	[]	[]	[]	[]	[]

Example: First Half of Year One

Activity/Goal	Specifics	Jan
Long-Term Career Goal	Achieve an associate's degree in science with a major in nursing	
College Milestones		
Milestone 1	Enroll in prerequisite courses	[✓]
Milestone 2	Maintain a B average in courses	[]
Skills Fostered outside College		
Skill 1	Attend a nursing seminar or workshop	[]
Skill 2	Volunteer at a local clinic or hospital	[]
Long-Term Personal Goal	Learn to play the guitar	
Personal Milestone 1	Purchase a beginner's guitar	[✓]
Personal Milestone 2	Learn basic chords and practice daily	[]

Popular Project Management Apps in the Workplace:

1. **Notion:** An all-in-one workspace tool that blends notes, databases, tasks, and more into a cohesive environment.
2. **Trello:** Utilizes a card-based system, allowing for easy task organization and project visualization. With plugins, it can also mimic Gantt chart functionality.
3. **Asana:** A task management app that emphasizes team collaboration. It provides timeline views akin to Gantt charts, ensuring projects stay on track.
4. **Microsoft Project:** A dedicated project management tool with in-built Gantt chart functionality, ideal for detailed project planning.
5. **Basecamp:** A holistic project management and team communication tool, which, while it doesn't have native Gantt functionality, integrates well with tools that do.

Gaining familiarity with Gantt-like charts now will provide you with a solid foundation, making your transition to these digital tools smoother and more intuitive.

The first sections of this chapter are from *College Success*, “[Goal-Setting and Motivation](#),” CC-BY-4.0. The section on SMART and Gantt Charts has been added by the authors of this textbook.

6. The Importance of Time and Why We Procrastinate

Time Management In College

You may find that time management in college is very different from anything you have experienced previously. For the last 12 years, almost all your school time was managed by educators and your parents. What you did and when you did it was controlled by others. In many cases, even after-school time was set by scheduled activities (such as athletics) and by nightly homework that was due the next day.

In the workplace, the situation is not very different, with activities and time on task being monitored by the company and its management. This is so much a part of the working environment that many companies research how much time each task should take, and they hold employees accountable for the time spent on these job functions. In fact, having these skills will help you stand out on the job and in job interviews.

K-12	College
Many class activities are planned.	Class time is given to receiving information.
Homework is often similar for each student.	You may have freedom in homework choices.
Time is managed by others more often.	Time is managed by the student.

In college, there is a significant difference because a great deal of time management is left up to you. While it is true that there are assignment due dates and organized classroom activities, learning at the college level requires more than just the simple completion

of work. It involves decision-making and the ability to evaluate information. This is best accomplished when you are an active partner in your own learning activities.

According to educational guidelines, a 75-minute class technically means 1.5 clock hours, even though it adds up to 1 hour 15 minutes (weird I know). So, a 75-minute class that meets twice a week counts as 3 clock hours. If you attend a normal 3-credit course in a 15-week semester that meets twice a week (3 clock hours total), the expectation is that the average student should spend about 3-4 hours working on the material (reading, thinking, completing assignments, etc.) *outside* of class. If you meet once a week, your instructor will expect you to spend about 5-6 hours working on the course outside of class. Fully online courses are supposed to average 7.5 hours per week. Eight-week sessions double these expectations. (Note that these are general estimates and your actual experience may vary.)

As an example of how this works, think about a college assignment that involves giving a classroom presentation. To complete the assignment, you are given time to research and reflect on the information found. As a part of the assignment, you must reach your own conclusions and determine which information that you have found is best suited for the presentation. While the date of the actual presentation and how long it will last are usually determined by the instructor, how much time you spend gathering information, the sources you use, and how you use them are left to you.

You Have Lots of Time to Manage

For college-level learning, this approach is important enough that you can expect to spend much more time on learning activities outside the classroom than you will in the classroom. In fact, the estimated time you should spend will be at least two hours of outside learning for every one hour of lecture. Some weeks may

be more intense, depending on the time of the semester and the courses you are taking. If those hours are multiplied over several courses in a given session, you can see how there is a significant amount of time to manage. Unfortunately, many students do not always take this into consideration, and they spend far less time than is needed to be successful. The results of poor time management are often a shock to them.

“In college, as an active participant in your own education, what you do and when you do it is largely determined by you.”

The Nature of What You Have to Do Has Changed

Returning to our example of the classroom-presentation assignment, you can see that the types of learning activities in college can be very different from what you have experienced previously. While there may have been similar assignments in high school, such as presentations or written papers, the level of expectation with length and depth is significantly different in college. This point is made very clear when comparing facts about the requirements of high school work to the type of work students produce in college. One very strong statistic that underscores this comes from a study conducted by the Pew Research Center. They found that 82 percent of teens report that their typical high school writing assignments were only a single paragraph to one page in length.¹ This is in stark contrast to a number of sources that say that writing assignments in lower-level college courses are usually 5–7 pages in length, while writing assignments in upper-level courses increase to 15–20 pages.

It is also interesting to note that the amount of writing done by

1. <http://www.pewinternet.org/2008/04/24/writing-technology-and-teens/>

a college student can differ depending on their program of study. The table below indicates the estimated average amount of writing assigned in several disciplines. To estimate the number of pages of assigned writing, the average number of writing assignments of a given page length was multiplied by an approximate number of pages for the assignment type (see Estimating Number of Pages Written for calculation details).

Writing Assignments Vary in Length

Discipline	Number of Pages Assigned in Introductory Course
Arts & Humanities	49
Biological Sciences, Agriculture, & Natural Resources	47
Physical Sciences, Mathematics, & Computer Science	44
Social Sciences	52
Business	48
Communications, Media, & Public Relations	50
Education	46
Engineering	46
Health Professions	43
Social Service Professions	47

Table 3.2 Credit: Updated NSSE (Since 2013)² [3](#)

High school homework often consists of worksheets or tasks based on reading or classroom activities. In other words, all the students are doing the same tasks, at relatively the same time, with little autonomy over their own education.

2. <http://www.pewinternet.org/2008/04/24/writing-technology-and-teens/>

Using the earlier example of the presentation assignment, not only will what you do be larger in scale, but the depth of understanding and knowledge you will put into it will be significantly more than you may have encountered in previous assignments. This is because there are greater expectations required of college graduates in the workplace. Nearly any profession that requires a college degree has with it a level of responsibility that demands higher-level thinking and therefore higher learning. An often-cited example of this is the healthcare professional. The learning requirements for that profession are strict because we depend on those graduates for our health and, in some cases, our lives. While not every profession may require the same level of study needed for healthcare, most do require that colleges maintain a certain level of academic rigor to produce graduates who are competent in their fields.

Procrastination

Simply put, procrastination is the act of delaying some task that needs to be completed. It is something we all do to greater and lesser degrees. For most people, a little minor procrastination is not a cause for great concern. But there are situations where procrastination can become a serious problem with a lot of risk. These include: when it becomes a chronic habit, when there are a number of tasks to complete and little time, or when the task being avoided is very important.

Because we all procrastinate from time to time, we usually do not give it much thought, let alone think about its causes or effects. Ironically, many of the psychological reasons for why we avoid a given task also keep us from using critical thinking to understand why procrastination can be extremely detrimental, and in some cases difficult to overcome.

To succeed at time management, you must understand some of

the hurdles that may stand in your way. Procrastination is often one of the biggest. What follows is an overview of procrastination with a few suggestions on how to avoid it.

The Reasons behind Procrastination

There are several reasons we procrastinate, and a few of them may be surprising. On the surface we often tell ourselves it is because the task is something we do not want to do, or we make excuses that there are other things more important to do first. In some cases this may be true, but there can be other contributors to procrastination that have their roots in our physical well-being or our own psychological motivations.

Lack of Energy

Sometimes we just do not feel up to a certain task. It might be due to discomfort, an illness, or just a lack of energy. If this is the case, it is important to identify the cause and remedy the situation. It could be something as simple as a lack of sleep or improper diet. Regardless, if a lack of energy is continually causing you to procrastinate to the point where you are beginning to feel stress over not getting things done, you should definitely assess the situation and address it.

Lack of Focus

Much like having low physical energy, a lack of mental focus can be a cause of procrastination. This can be due to mental fatigue, being disorganized, or allowing yourself to be distracted by other things. Again, like low physical energy, this is something that may have farther-reaching effects in your life that go beyond the act of simply avoiding a task. If it is something that is recurring, you should properly assess the situation.

Fear of Failure

This cause of procrastination is not one that many people are aware of, especially if they are the person avoiding tasks because of it. To put it in simple words, it is a bit of trickery we play on ourselves by avoiding a situation that makes us psychologically uncomfortable. Even though they may not be consciously aware of it, the person facing the task is afraid that they cannot do it or

will not be able to do it well. If they fail at the task, it will make them appear incompetent to others or even to themselves. Where the self-trickery comes in is by avoiding the task. In the person's mind, they can rationalize that the reason they failed at the task was because they ran out of time to complete it, not that they were incapable of doing it in the first place.

It is important to note that a fear of failure may not have anything to do with the actual ability of the person suffering from it. They could be quite capable of doing the task and performing well, but it is the fear that holds them back.

The Effects of Procrastination

In addition to the causes of procrastination, you must also consider what effects it can have. Again, many of these effects are obvious and commonly understood, but some may not be so obvious and may cause other issues.

Loss of Time

The loss of time as an effect of procrastination is the easiest to identify since the act of avoiding a task comes down to not using time wisely. Procrastination can be thought of as using the time you have to complete a task in ways that do not accomplish what needs to be done.

Loss of Goals

Another of the more obvious potentially adverse effects of procrastination is the loss of goals. Completing a task leads to achieving a goal. These can be large or small (e.g., from doing well on an assignment to being hired for a good job). Without goals you might do more than delay work on a task—you may not complete it at all. The risk for the loss of goals is something that is very impactful.

Loss of Self-Esteem

Often, when we procrastinate we become frustrated and disappointed in ourselves for not getting important tasks completed. If this continues to happen, we can begin to develop a low opinion of ourselves and our own abilities. We begin to suffer from low self-esteem and might even begin to feel like there is

something wrong with us. This can lead to other increasingly negative mental factors such as anger and depression. As you can see, it is important for our own well-being to avoid this kind of procrastination effect.

Stress

Procrastination causes stress and anxiety, which may seem odd since the act of procrastination is often about avoiding a task we think will be stressful in itself! Anyone who has noticed that nagging feeling when they know there is something else they should be doing is familiar with this.

On the other hand, some students see that kind of stress as a boost of mental urgency. They put off a task until they feel that surge of motivation. While this may have worked in the past, they quickly learn that procrastinating when it comes to college work almost always includes an underestimation of the tasks to be completed— sometimes with disastrous results.

Strategies for Psyching Ourselves Out and Managing Procrastination

Now that you understand a few of the major problems procrastination can produce, let's look at methods to manage procrastination and get you on to completing the tasks, no matter how unpleasant you think they might be.

Get Organized

Much of this chapter is dedicated to defining and explaining the nature of time management. The most effective way to combat procrastination is to use time and project management strategies such as schedules, goal setting, and other techniques to get tasks accomplished in a timely manner.

Put Aside Distractions

Several of the methods discussed in this chapter deal specifically with distractions. Distractions are time-killers and are the primary

way people procrastinate. It is too easy to just play a video game a little while longer, check out social media, or finish watching a movie when we are avoiding a task. Putting aside distractions is one of the primary functions of setting priorities.

Reward Yourself

Rewarding yourself for the completion of tasks or meeting goals is a good way to avoid procrastination. An example of this would be rewarding yourself with the time to watch a movie you would enjoy after you have finished the things you need to do, rather than using the movie to keep yourself from getting things done.

Be Accountable—Tell Someone Else

A strong motivational tool is to hold ourselves accountable by telling someone else we are going to do something and when we are going to do it. This may not seem like it would be very effective, but on a psychological level we feel more compelled to do something if we tell someone else. It may be related to our need for approval from others, or it might just serve to set a level of commitment. Either way, it can help us stay on task and avoid procrastination—especially if we take our accountability to another person seriously enough to warrant contacting that person and apologizing for not doing what we said we were going to do.

This chapter is from *College Success*, “[Time Management in College](#)” and “[Procrastination: The Enemy Within](#).” CC-BY 4.0.

	Always	Usually	Sometimes	Rarely	Never
I like to be given strict deadlines for each task. It helps me stay organized and on track.					
I would rather be 15 minutes early than 1 minute late.					
I like to improvise instead of planning everything out ahead of time.					
I prefer to be able to manage when and how I do each task.					
I have a difficult time estimating how long a task will take.					
I have more motivation when there is an upcoming deadline. It helps me focus.					
I have difficulty keeping priorities in the most beneficial order.					

Table 3.3

This exercise is intended to help you recognize some things about your own time management style. The important part is for you to identify any areas where you might be able to improve and to find solutions for them. This chapter will provide some solutions, but there are many others that can be found by researching time management strategies.

After you have decided your best response to each

statement, think about what they may mean in regard to potential strengths and/or challenges for you when it comes to time management in college. If you are a person that likes strict deadlines, what would you do if you took a course that only had one large paper due at the end? Would you set yourself a series of mini deadlines that made you more comfortable and that kept things moving along for you? Or, if you have difficulty prioritizing tasks, would it help you to make a list of the tasks to do and order them, so you know which ones must be finished first?

Strategies for Managing Time

The simplest way to manage your time is to accurately plan for how much time it will take to do each task, and then set aside that amount of time. How you divide the time is up to you. If it is going to take you five hours to study for a final exam, you can plan to spread it over five days, with an hour each night, or you can plan on two hours one night and three hours the next. What you would not want to do is plan on studying only a few hours the night before the exam and find that you fell very short on the time you estimated you would need. If that were to happen, you would have run out of time before finishing, with no way to go back and change your decision. In this kind of situation, you might even be tempted to “pull an all-nighter,” which is a phrase that has been used among college students for decades. In essence it means going without sleep for the entire night and using that time to finish an assignment. While this method of trying to make up for poor planning is common enough to have a name, rarely does it produce the best work.

Activity

Many people are not truly aware of how they actually spend their time. They make assumptions about how much time it takes to do certain things, but they never really take an accurate account.

In this activity, write down all the things you think you will do tomorrow, and estimate the time you will spend doing each. Then track each thing you have written down to see how accurate your estimates were.

Obviously, you will not want to get caught up in too much tedious detail, but you will want to cover the main activities of your day—for example, working, eating, driving, shopping, gaming, being engaged in entertainment, etc.

After you have completed this activity for a single day, you may consider doing it for an entire week so that you are certain to include all of your activities.

Many people that take this sort of personal assessment of their time are often surprised by the results. Some even make lifestyle changes based on it.

Activity	Estimated Time	Actual Time
Practice Quiz	5 minutes	15 minutes
Lab Conclusions	20 minutes	35 minutes
Food shopping	45 minutes	30 minutes
Drive to work	20 minutes	20 minutes
Physical Therapy	1 hour	50 minutes

Table 3.4 Sample Time Estimate Table

Of all the parts of time management, accurately predicting how long a task will take is usually the most difficult—and the most elusive. Part of the problem comes from the fact that most of us are not very accurate timekeepers, especially when we are busy applying ourselves to a task. The other issue that makes it so difficult to accurately estimate time on task is that our estimations must also account for things like interruptions or unforeseen problems that cause delays.?

When it comes to academic activities, many tasks can be dependent upon the completion of other things first, or the time a task takes can vary from one instance to another, both of which add to the complexity and difficulty of estimating how much time and effort are required.

For example, if an instructor assigned three chapters of reading, you would not really have any idea how long each chapter might take to read until you looked at them. The first chapter might be 30 pages long while the second is 45. The third chapter could be only 20 pages but made up mostly of charts and graphs for you to compare. By page count, it might seem that the third chapter would take the least amount of time, but actually studying charts and graphs to gather information can take longer than regular reading.?

To make matters even more difficult, when it comes to estimating time on task for something as common as reading, not all reading takes the same amount of time. Fiction, for example, is usually a faster read than a technical manual. But something like the novel *Finnegan's Wake* by James Joyce is considered so difficult that most readers never finish it.

Knowing Yourself

While you can find all sorts of estimates online as to how long a certain task may take, it is important to know these are only

averages. People read at different speeds, people write at different speeds, and those numbers even change for each individual depending on the environment.

If you are trying to read in surroundings that have distractions (e.g., conversations, phone calls, etc.), reading 10 pages can take you a lot longer than if you are reading in a quiet area. By the same token, you may be reading in a quiet environment (e.g., in bed after everyone in the house has gone to sleep), but if you are tired, your attention and retention may not be what it would be if you were refreshed.

In essence, the only way you are going to be able to manage your time accurately is to know yourself and to know how long it takes you to do each task. But where to begin?

Below, you will find a table of common college academic activities. This list has been compiled from a large number of different sources, including colleges, publishers, and professional educators, to help students estimate their own time on tasks. The purpose of this table is to both give you a place to begin in your estimates and to illustrate how different factors can impact the actual time spent.

You will notice that beside each task there is a column for the *unit*, followed by the average *time on task*, and a column for notes. The *unit* is whatever is being measured (e.g., pages read, pages written, etc.), and the *time on task* is an average time it takes students to do these tasks. It is important to pay attention to the notes column, because there you will find factors that influence the time on task. These factors can dramatically change the amount of time the activity takes.

Time on Task

Activity	Unit	Time on task	Notes
General academic reading (textbook, professional journals)	1 page	5–7 minutes	Be aware that your personal reading speed may differ and may change over time.
Technical reading (math, charts and data)	1 page	10–15 minutes	Be aware that your personal reading speed may differ and may change over time.
Simple Quiz or homework question: short answer—oriented toward recall or identification type answers	Per question	1–2 minutes	Complexity of question will greatly influence the time required.
Complex Quiz or homework question: short answer—oriented toward application, evaluation, or synthesis of knowledge	Per question	2–3 minutes	Complexity of question will greatly influence the time required.
Math problem sets, complex	Per question	15 minutes	For example, algebra, complex equations, financial calculations
Writing: short, no research	Per page	60 minutes	Short essays, single-topic writing assignments, summaries, freewriting assignments, journaling—includes drafting, writing, proofing, and finalizing
Writing: research paper	Per page	105 minutes	Includes research time, drafting, editing, proofing, and finalizing (built into per-page calculation)
Study for quiz	Per chapter	60 minutes	45–90 minutes per chapter, depending upon complexity of material
Study for exam	Per exam	90 minutes	1–2 hours, depending upon complexity of material

Table 3.5 Time on task for common college activities.

Again, these are averages, and it does not mean anything if your times are a little slower or a little faster. There is no “right amount of time,” only the time that it takes you to do something so you can accurately plan and manage your time.

There is also another element to look for in the table. These are differentiations in the similar activities that will also affect the time you spend. A good example of this can be found in the first four rows. Each of these activities involves reading, but you can see that depending on the material being read and its complexity, the time spent can vary greatly. Not only do these differences in time account for the different types of materials you might read (as you found in the comparative reading exercise earlier in this chapter), but also they also take into consideration the time needed to think about what you are reading to truly understand and comprehend what it is saying.

Enhanced Strategies

Over the years, people have developed a number of different strategies to manage time and tasks. Some of the strategies have proven to be effective and helpful, while others have been deemed not as useful.

The good news is that the approaches that do not work very well or do not really help in managing time do not get passed along very often. But others, those which people find of value, do. What follows here are three unique strategies that have become staples of time management. While not everyone will find that all three work for them in every situation, enough people have found them beneficial to pass them along with high recommendations.

Daily Top Three

The idea behind the *daily top three* approach is that you determine which three things are the most important to finish that

day, and these become the tasks that you complete. It is a very simple technique that is effective because each day you are finishing tasks and removing them from your list. Even if you took one day off a week and completed no tasks on that particular day, a *daily top three* strategy would have you finishing 18 tasks in the course of a single week.

Pomodoro Technique



Figure 3.14 The Pomodoro Technique is named after a type of kitchen timer, but you can use any clock or countdown timer. (Marco Verch /Flickr / Attribution 2.0 Generic (CC BY 2.0))

The Pomodoro Technique was developed by Francesco Cirillo. The basic concept is to use a timer to set work intervals that are followed by a short break. The intervals are usually about 25 minutes long and are called *pomodoros*, which comes from the Italian word

for tomato because Cirillo used a tomato-shaped kitchen timer to keep track of the intervals.

In the original technique there are six steps:

1. Decide on the task to be done.
2. Set the timer to the desired interval.
3. Work on the task.
4. When the timer goes off, put a check mark on a piece of paper.
5. If you have fewer than four check marks, take a short break (3–5 minutes), then go to Step 1 or 2 (whichever is appropriate).
6. After four pomodoros, take a longer break (15–30 minutes), reset your check mark count to zero, and then go to Step 1 or 2.



Figure 3.15 The Pomodoro Technique contains five defined steps.

There are several reasons this technique is deemed effective for many people. One is the benefit that is derived from quick cycles of work and short breaks. This helps reduce mental fatigue and the lack of productivity caused by it. Another is that it tends to encourage practitioners to break tasks down to things that can be completed in about 25 minutes, which is something that is usually manageable from the perspective of time available. It is much easier to squeeze in three 25-minute sessions of work time during the day than it is to set aside a 75-minute block of time.

Eat the Frog

Of our three quick strategies, *eat the frog* probably has the strangest name and may not sound the most inviting. The name comes from a famous quote, attributed to Mark Twain: “Eat a live frog first thing in the morning and nothing worse will happen to you the rest of the day.” *Eat the Frog* is also the title of a best-selling book by Brian Tracy that deals with time management and avoiding procrastination.

How this applies to time and task management is based on the concept that if a person takes care of the biggest or most unpleasant task first, everything else will be easier after that.

Although stated in a humorous way, there is a good deal of truth in this. First, we greatly underestimate how much worry can impact our performance. If you are continually distracted by anxiety over a task you are dreading, it can affect the task you are working on at the time. Second, not only will you have a sense of accomplishment and relief when the task you are concerned with is finished and out of the way, but other tasks will seem lighter and not as difficult.

Breaking Down the Steps and Spreading Them over Shorter Work Periods

Above, you read about several different tried-and-tested strategies for effective time management—approaches that have become staples in the professional world. In this section you will read about two more creative techniques that combine elements from these other methods to handle tasks when time is scarce and long periods of time are a luxury you just do not have.

The concept behind this strategy is to break tasks into smaller, more manageable units that do not require as much time to complete. As an illustration of how this might work, imagine that you are assigned a two-page paper that is to include references. You estimate that to complete the paper—start to finish—would take you

between four and a half and five hours. You look at your calendar over the next week and see that there simply are no open five-hour blocks (unless you decided to only get three hours of sleep one night). Rightly so, you decide that going without sleep is not a good option. While looking at your calendar, you do see that you can squeeze in an hour or so every night. Instead of trying to write the entire paper in one sitting, you break it up into much smaller components as shown in the table below:

Breaking Down Projects into Manageable-Sized Tasks

Day/Time	Task	Time
Monday, 6:00 p.m.	Write outline; look for references.	60 minutes
Tuesday, 6:00 p.m.	Research references to support outline; look for good quotes.	60 minutes
Wednesday, 7:00 p.m.	Write paper introduction and first page draft.	60 minutes
Thursday, 6:00 p.m.	Write second page and closing draft.	60 minutes
Friday, 5:00 p.m.	Rewrite and polish final draft.	60 minutes
Saturday, 10:00 a.m.	<i>Only if needed—finish or polish final draft.</i>	60 minutes?

Table 3.8

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:00–10:00		Work		Work		
10:00–12:00	Algebra	Work	Algebra	Work	Algebra	10 a.m. a.m. On if need
12:00–2:00	Lunch/study	1 p.m. English Comp	Lunch/study	1 p.m. English Comp	Lunch/study	Famil picnic
2:00–4:00	History	English Comp	History	English Comp	History	Famil picnic
4:00–6:00	Study for Algebra quiz.	Grocery	Study for History exam.	Study for History exam.	5 p.m.–6 p.m. Rewrite and polish final draft.	Famil picnic
6:00–7:00	Write outline; look for references.	Research references to support outline; look for good quotes.	Research presentation project.	Write second page and closing draft	Create presentation.	Meet with Darcy
7:00–8:00	Free time	Free time	Write paper introduction and first page draft.	Research presentation project.	Create presentation.	

Table 3.9

While this is a simple example, you can see how it would redistribute tasks to fit your available time in a way that would make completing the paper possible. In fact, if your time constraints were even more rigid, it would be possible to break these divided tasks down even further. You could use a variation of the Pomodoro Technique and write for three 20-minute segments each day at different times. The key is to look for ways to break down the entire task into smaller steps and spread them out to fit your schedule.

Analyzing Your Schedule and Creating Time to

Work

Of all the strategies covered in this chapter, this one may require the most discipline, but it can also be the most beneficial in time management. The fact is most of us waste time throughout the day. Some of it is due to a lack of awareness, but it can also be caused by the constraints of our current schedules. An example of this is when we have 15 to 20 minutes before we must leave to go somewhere. We don't do anything with that time because we are focused on leaving or where we are going, and we might not be organized enough to accomplish something in that short of a time period. In fact, a good deal of our 24-hour days are spent a few minutes at a time waiting for the next thing scheduled to occur. These small units of time add up to a fair amount each day.

The intent of this strategy is to recapture those lost moments and use them to your advantage. This may take careful observation and consideration on your part, but the results of using this as a method of time management are more than worth it.

The first step is to look for those periods of time that are wasted or that can be repurposed. In order to identify them, you will need to pay attention to what you do throughout the day and how much time you spend doing it. The example of waiting for the next thing in your schedule has already been given, but there are many others. How much time do you spend in activities after you have really finished doing them but are still lingering because you have not begun to do something else (e.g., letting the next episode play while binge-watching, reading social media posts or waiting for someone to reply, surfing the Internet, etc.)? You might be surprised to learn how much time you use up each day by just adding a few unproductive minutes here and there.

If you set a limit on how much time you spend on each activity, you might find that you can recapture time to do other things. An example of this would be limiting yourself to reading news for 30 minutes. Instead of reading the main things that interest you and

then spending an additional amount of time just looking at things that you are only casually interested in because that is what you are doing at the moment, you could stop after a certain allotted period and use the extra time you have gained on something else.

After you identify periods of lost time, the next step will be to envision how you might restructure your activities to bring those extra minutes together into useful blocks of time. Using the following scenario as an illustration, we will see how this could be accomplished.



Figure 3.16 Sarah has to balance a lot of obligations.

On Tuesday nights, Sarah has a routine: After work, she does her shopping for the week (2 hours driving and shopping) and then prepares and eats dinner (1 hour). After dinner, she spends time on homework (1 hour) and catching up with friends, reading the news, and other Internet activities (1 hour), and then she watches

television or reads before going to bed (1 hour). While it may seem that there is very little room for improvement in her schedule without cutting out something she enjoys, limiting the amount of time she spends on each activity and rethinking how she goes about each task can make a significant difference.

In this story, Sarah's Tuesday-night routine includes coming home from work, taking stock of which items in her home she might need to purchase, and then driving to the store. While at the store, she spends time picking out and selecting groceries as she plans for meals she will eat during the rest of the week. Then, after making her purchases, she drives home. Instead, if she took the time to make a list and plan for what she needed at the store before she arrived, she would not spend as much time looking for inspiration in each aisle. Also, if she had a prepared list, not only could she quickly pick up each item, but she could stop at the store on the way home from work, thus cutting out the extra travel time. If purchasing what she needed took 30 minutes less because she was more organized and she cut out an additional 20 minutes of travel time by saving the extra trip to the store from her house, she could recapture a significant amount of her Tuesday evening. If she then limited the time she spent catching up with friends and such to 30 minutes or maybe did some of that while she prepared dinner, she would find that she had added almost an extra hour and a half to the time available to her on that evening, without cutting out anything she needed to do or enjoys. If she decided to spend her time on study or homework, this would more than double the time she previously had available in her schedule for homework.

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PART III

COMMUNICATION

8. Communication and Technology

Questions to Consider:

- Is technology vital to your ability to communicate well?
- Are there rules to follow when using communication technology?
- How do you take control of your online communication?

“Now we know that once computers connected us to each other, once we became tethered to the network, we really didn’t need to keep computers busy. They keep us busy.”

– Sherry Turkle⁷

Is Technology Vital to Your Ability to Communicate Well?

Over a billion people use chat rooms, mailing lists, instant messengers, social network services, newsgroups, games, wikis, blogs, and more in order to share social relationships and organize collective action. Everything is connected: people, information, events, and places, all the more so with the advent of online social media. You live in a world where the traditional forms of education, conversations, relationships, and social activity in general have been transformed by the ubiquitous presence of technology. Digital media affects every student’s life and that of their families, friends, and the wider community. Most of you have grown up while this transformation has taken place. The new technologies have created dramatic changes in the relationship between people and

information. Though you will come across people who don't want to believe that these new technologies are here to stay, we, as humans, will never be able to separate ourselves from our own inventions, and trying to do so is perhaps only a step backward in an evolutionary sense. Therefore it is important that we learn to adapt our behavior to include the new inventions. Technology, after all, is an extension of the human mind, and the new technologies are only tools we have created over years of fashioning new ways to do things.

We continue to move from simple to complex tools. Advancements of technology go hand in hand with changes in communication options. The telegraph was replaced with landlines, those went out of style as the cordless phone became available, and this phone eventually morphed to a cell phone. When the Internet became accessible by cell phone, cell phones became devices that revolutionized personal communication.

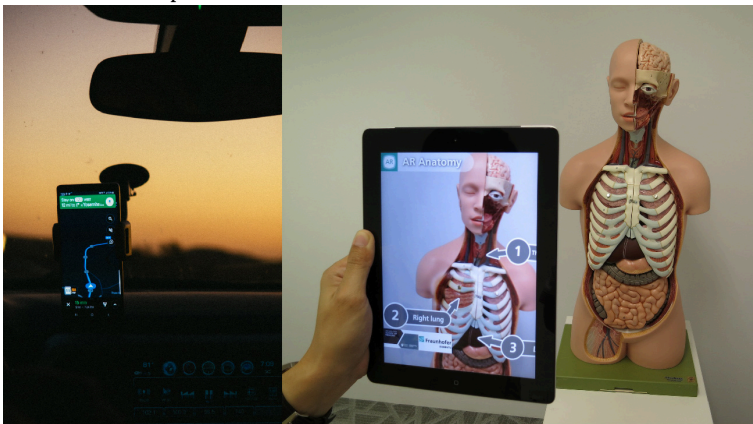


Figure 8.3 Just as mobile device roadmaps have replaced paper ones, augmented reality may replace our typical means interacting with the world. From learning about anatomy to cooking a meal to assembling a child's toy, we may reach a point in which we can't imagine living without AR. (Credit Zedinteractive / Pixabay)

The following activity is a good way for you to reflect on your own use of technology. It is always interesting to step back and actually

see what platforms you use and how much time you spend using them.

ACTIVITY

Share your personal story about when you started using social media. Include what social media you use, how you use it, and how much time you spend doing so. At the end of this story, discuss what you might like to see in the future of social media. What other communication technologies do you wish were available to you, and why?

Are There Rules to Follow When Using Communication Technology?

Did you find anything significant about how you use social media? When you carefully looked at how much time you spent on the different platforms, were you surprised? It is probably a good thing to sometimes step back and take a look at how we use our communication tools, and even more importantly, we need to ask ourselves if we are using them to our advantage and not just to pass the time.

Netiquette

Just as it is important to know your responsibilities in using communication technologies, it is necessary for you to understand that there is a code of honor and etiquette to go along with them.

Here are a few pointers on how to go about being active on the Internet without offending or annoying others.

1. Don't write emails, post to social media sites, or talk in chat rooms in ALL CAPS. CAPS can be interpreted as screaming or talking in a very loud voice.
2. Don't make fun of others.
3. Apologize if someone was offended and did not "hear" what you were saying in the way you meant it.
4. When stating a strong opinion, it is not a bad idea to use the abbreviation of IMHO (in my humble opinion). It might keep people from reacting strongly right back at you.
5. Remember, no one can hear your tone of voice or see your facial expression, so use words carefully to get your message across.
6. Be respectful of your audience with the level of familiarity used.

College Netiquette

While these Netiquette guidelines are applicable in nearly every environment, communication in college may have additional or more stringent rules to consider. Always be particularly mindful of how you communicate in any official environments, such as online courses, course discussion boards, and even on social media specifically related to your college, such as a club or team page.

For example, if your political science class requires students to post in a discussion forum after each night's reading, students may have the opportunity to argue about issues or politics. Vibrant discussion, and even argument, may be acceptable, but personal attacks or insults won't advance the discussion and could result in more significant consequences. Just as you wouldn't—and couldn't—become overly animated in an in-class argument, online

arguments should remain civil. The goal is to make your points with evidence and reason, not emotion and assertiveness.

Finally, just as a note of caution, college codes of conduct regarding communication often apply to *any* interaction between members of the community, whether or not they occur on campus or in a campus online environment. Any inappropriate, offensive, or threatening comments or messages may have severe consequences.

Our communication in college conveys how we feel about others and how we'd like to interact with them. Unless you know for certain they don't like it, you should use professional or semi-formal communication when interacting with college faculty and staff. For example, if you need to send a message explaining something or making a request, the recipient will likely respond more favorably to it if you address them properly and use thoughtful, complete sentences.

In a similar manner, you can make or break relationships with your classmates depending on how you communicate with them. Consider the following scenario:

Demetrius sends an email to several classmates about the details of a group assignment. He asks about availability and about which member of the group will take responsibility for which aspect of the project. He's received four responses addressing availability, but no one volunteers for the responsibilities. Demetrius replies to all with an attempt at creating a division of responsibilities by typing different names next to each role. He uses ALL CAPS to make sure his classmates notice the suggestions. Lee responds immediately. They don't like being forced into a specific role, and think Demetrius should have waited until the first group session instead of forcing his opinion on the group. Shirisha jumps in to mention that she's upset Demetrius chose to put her in a non-speaking role of recording secretary.

What mistake did Demetrius make? How might he have handled the situation more smoothly?

ACTIVITY

You most likely have considerable experience on a variety of social media platforms. Can you add three more suggestions for how to navigate these sites politely and with consideration for others?

Now, add three suggestions specifically related to considerate communication in online educational environments.

How Do You Control Your Online Communication Strategies?

“Whether digital media will be beneficial or destructive in the long run doesn’t depend on the technologies, but on the literacy of those who use them.”

— *Howard Rheingold*

What is important is that we have to decide what we are going to do with the new communication tools for our future. We need to understand when to log on and when to log off. These days you sometimes find yourself being bombarded with new technologies and social media platforms, and you don’t know how you will keep up with them all. You have multiple sites sending you continuous notifications and find yourself scrambling to look at them and perhaps respond. Perhaps turning off those notifications will free up your mind a bit. Sitting at your desk in your dorm room and trying to do an assignment for a class can be difficult if your phone is blinking messages at you continuously.

It is probably important sometimes to take the focus away from the media itself and look at oneself. What is happening to our minds, our sense of self, and our ways of representing ourselves to others when we spend a significant portion of our time on various online sites? How do we mediate our relationships differently? What kinds

of signals do we send, knowingly and unknowingly? Are we shaping the media we use, or is it shaping us? Sometimes we hide behind our on-screen identities as well as navigate social media sites in ways that make us communicate with people that are like ourselves. Do we use these new communication tools appropriately?

The following activity might help clarify how well you utilize your social media platforms.

ANALYSIS QUESTION

Go outside your usual comfort zone and friend group. Find someone with whom you disagree, and think about how what they said had an effect on you. Did they use correct etiquette when saying what they said? If you respond, what would you do to make certain your response was heard correctly and was not offensive?

Ways to Take Control of Your Online Communication

Howard Rheingold, a technology guru who coined the term “virtual community” in 1993, has been thinking and writing about the changes that technology has been making over the years. He has come to the opinion that in order for us to deal with the new communication opportunities, we must learn about what he calls “mindful participation.”⁸ Rheingold doesn’t suggest, as many others do, that these new technologies are bad for us. He offers ways to engage online that keep us in control of our actions and make us a bit more productive about our use of online platforms. He believes in social media literacy and suggests that learning the following five literacies will make our life on the Internet more productive, less stressful, and ultimately more enjoyable. If social media is our most often used form of communication, then the following five literacies

should help us manage our time online and keep us in control of the tools we use for purposes of communication.



Figure 8.4 Howard Rheingold explores ways we can consider our use and consumption of media technologies, such as social media, in terms of five literacy areas. Asking ourselves questions will lead us to thoughtfully consider how an online environment may be changing us and our relationships. (Credit: Modification of work by Howard Rheingold.)

Attention

Attention is the first literacy and is the fundamental building block of how individuals think. It is sometimes difficult to focus our attention since our minds tend to wander in a random manner. It is therefore essential that you become more aware of how you

are directing your attention. Consider being in a lecture hall and trying to focus on the professor and what she is saying. Is your full attention there? Are you also scrolling through some social media feed while listening to the lecture? When you are in your dorm room working on a class assignment, are you also watching your social media notifications, listening to music, talking to your roommate, and clicking on various ads on a website? On what is your attention most focused? Probably on everything and consequently on nothing. Learning how to pay attention to what is most important at the moment will help you fine-tune your skills.



Figure 8.5 Paying attention in class, in the face of many distractions, takes effort and awareness. The benefits, both for the class and for the long-term ability to retain your focus, will be extremely valuable. (Credit: Pixabay / Pexels)

Participation

And even though you might be really good at using online applications and connecting with friends, that does not necessarily

mean that you always understand the implications of your participation or that you are actually participating.

Participation, the next literacy, is much broader as it recognizes the vast population of users that are connected. Participation is connecting with the tool, not people. It is a way of becoming an active citizen and not just a passive consumer. There are multiple ways to participate on a variety of social media platforms. In fact, you probably don't realize that clicking on a "like," making a short comment on a picture, or whatever else one does on a site is actually participating. Of course, the effect of your participation can vary, but it can also be very powerful. You participate when you post, fill out a survey, start your own blog, respond to others' blogs, or just watch a video on YouTube. All of these actions are a form of participation.

In college, participation with communication environments and other resources is often essential for success and for your grade. If you use learning management systems, online homework systems, polling or attendance software, or other educational media, you need to understand the levels and types of participation, as well as the implications of each. As with social media platforms, learning technology can be a powerful tool, and you'll likely engage with it throughout your academic and even your professional career.

Collaboration

The third literacy, **collaboration**, refers to your being able to work together using technology. Doing things together gives us more power than doing them alone. Think of all the times Twitter was used by multitudes of people to pass on information about major storms. When there was a bombing in Paris, people went to Twitter to let those people in the streets who'd been displaced know they had apartments and homes that they would open up to them. Of course, there are many collective intelligence projects, such as helping Coke come up with a new flavor, or GoFundMe sites to

help people in need of money for health reasons. The collaborative efforts of people communicating around a big project are endless and a perfect way to use communication technologies. Tools allowing collaboration allow you to share resources and work as a team, and build on each other's ideas.

ACTIVITY

Think of a time when you collaborated with others to get something done. This could be organizing a party, planning transportation to an event, doing a school project, building a stage for a play, or any other activity that was done as a group. What forms of communication did you use to work as a team? How did the environment and the other people in the group influence tools and methods you used? Complete the table below to illustrate the challenges, opportunities, and communication approaches you might use (or have used) for each situation.

Challenges	Opportunities	Communication Methods and Tools
Group project for an on campus (traditional) course.		
Group project for an online-only course.		
Planning an event with your extended family.		
Planning an event with your friends/peers.		

Table 8.1

Network Awareness

Network awareness is the fourth literacy. Technological networks now allow us to have a greater number of people we can contact. These networks multiply human capacity for social networking and allow connection in a matter of seconds. You can become a member of newsgroups, virtual communities, gossip sites, forums, and other organizations. Making use of these possibilities expands your ability to contribute to the vast stores of information on the Internet. At the same time, you should be conscious of the people whom you're inviting to hear you and influence you. Have you ever been intrigued, angered, or persuaded by a friend of a friend (someone you don't know at all) who commented on a social media posting? If so, you are in a relationship with that stranger, and they are affecting you.



Figure 8.6 Do you follow influencers? What is their impact on you?
(Credit: The Lazy Artist / Pexels)

Critical Consumption

The last literacy, critical consumption, helps us to discern what is true and what is not. We have to learn how to differentiate fact from fiction. Humans have a difficult time trusting people in everyday life; this also translates to the millions of people on the Internet using social media. Before believing what others have written, communicating with them, or using a tool, it is wise to do some detective work. Check the claims, the author's background, sources, and accuracy.

Critical consumption is closely related to Informational Literacy, which is discussed in Chapter 7 on Thinking.

Evolving Our Strategies to Match Our Evolving Technologies

Communication has changed because of the way we are using technology. Yes, we still write and talk, but where and how? There are myriad social media platforms that you can use for communication, from Snapchat to Twitter, each with its own set of rules and limitations. These platforms have completely changed many of the ways we transfer ideas and information, find romantic partners, keep in touch with friends and family, connect with our professors and classmates, make plans with teammates, look for employment, and so much more.

When using a device for communication, there are fewer nonverbal cues we can pick up on, only what the other person is posting or showing. In certain situations, such as talking on the phone, a person can't see hand gestures but can still hear a tone of voice. When typing, however, there is no tone of voice or hand gesture or body language. Sometimes typing may not convey the same message as saying what you're feeling.

Social media has made it easier to keep in contact with many people, but it also creates missed opportunities for new

relationships since we are too often looking down at our phones instead of talking with the person standing next to us.

ANALYSIS QUESTION

Technology has definitely had an effect on our society. Think about how it has this effect.

- Is that cell phone in your pocket something that has made life better?
- Are we empowering those who most often don't have access to power in our society?
- Or are we further alienating them?
- Does the ability to access global communications create people who are more open and free with their ideas?
- Is an email to a colleague in another country more significant than a snail mail letter?
- Are there any new platforms or apps that you are reluctant to try?

Socialization is an integral part of human behavior, and over time new technologies have made networking and communication more complex. The tools you have available for communication within your networks are powerful and fulfilling, but they can also stand in the way of real-time thinking, doing, relating, and communicating. The past twenty years have seen an explosion in new tools and means of communication, but the next twenty may see similarly rapid growth and change. Adaptability may be as important a skill as any method specific to a certain platform. The key is mindfully participating and knowing when to use and when not to use the new technological tools available to us, which may require learning and acceptance. In this way your communication with others will be positive and allow you to be productive in all aspects of your life.

GET CONNECTED

Information is processed and transferred faster than ever. Social media has become the place where people obtain information. This could be news on YouTube, shocking events on IGTV, or even fake rumors on Facebook spread from friends of friends. It almost seems that information can't travel fast enough today, but it's vital to take everything you see with a grain of salt and evaluate the information given based on what it is, its source, context, and credibility.

- The Verge published a [how-to guide on checking facts and sources online](#).
- [Social networking addiction](#) occurs when people become so dependent on Instagram, Snapchat, Twitter, Facebook, and related platforms that all of their communication seems to take place within these virtual places. Many researchers conclude that addiction to social media is much stronger than an addiction to cigarettes or alcohol.
- [Six Ways Social Media Changed the Way We Communicate](#) discusses how our ability and need to share and consume information quickly can lead to changes in our relationships and ourselves. The article also provides related links.

Footnotes

- ⁷Turkle, Sherry. *Alone Together*. New York: Basic Books. 2011.
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9. The Context of Communication

Questions to Consider:

- Does my form of communication change in certain situations?
- Do I use an altered style of talking when I am with different people?
- What role does listening play in communication?

Does My Form of Communication Change in Certain Situations?

The circumstances surrounding a message provide the context. These include the setting you are in, the culture that guides you and whomever you are communicating with, and the purpose of the communication to begin with. Context also includes the values people have, appropriateness of the message, the timing you choose to convey your message, and the reason behind your wanting to communicate. This means considering your audience, the place, the time, and all other variables that impact communicating constructively.



Figure 8.7 Your career area, work environment, its accepted style of

dress, and the relationships with your colleagues or clients all add context to your communication. (Credit (both photos): Lynconf Games / Flickr / Attribution 2.0 Generic (CC-BY 2.0))

Generally, all communication happens for a reason. When you are communicating with people, are you always on the same wavelength? Are you wide-awake and your roommate almost asleep? Is the baseball game really important to you but totally boring to the person you are talking with? It is important that everyone involved understands the context of the conversation. Is it a party, which lends itself to frivolous banter? Is the conversation about something serious that occurred? What are some of the relevant steps to understanding context? First of all, pay attention to timing. Is there enough time to cover what you are trying to say? Is it the right time to talk to the boss about a raise? What about the location? Should your conversation take place in the elevator, over email, in a chat room? Is everyone in the conversation involved for the same reason?

The following is an activity that might help you understand what is meant by context.

ANALYSIS QUESTION

Consider the context of a family dinner. You are at the table with siblings, cousins, parents, aunts and uncles, and grandparents. A wide variety of age groups are present around the dinner table. Are there any rules about how you behave in this circumstance? What are they?

Then put yourself in the context of a chat room with people you might know and some that you do not know. Are there rules for communicating in that situation? What are they?

Sometimes we have misconceptions about what is going on in a group situation. Perhaps we think that everyone there knows what

we are talking about. Or we think we know everyone's opinions on an issue or situation. Or we come into the conversation already thinking we are right and they are wrong. Communication in these instances can go very wrong. Why? We aren't listening or even preparing ourselves adequately for the conversation we hope to have. So often we are only concerned about what we have to say to an individual or a group and we don't step back long enough to reflect on what our message might mean to them. We seem to not care about how the message will be received and are often surprised by how poorly the communication actually went. Why? Because we didn't step back and think, "Hmmm, my aunt is a really religious person and probably would be offended by a conversation about sexual intimacy." Or, "My father is having a bit of financial trouble, and this might not be the right time to bring up money I need for a new car."

Do I Use an Altered Style of Talking When I Am With Different People?

There are so many instances in our lives when we think about our needs first and blurt out what we are thinking, leading to some critical misunderstandings. It is really important not only to be concerned about our need to communicate, but to take into consideration with whom we are communicating, when and where we are communicating, and how we are going to do so in a positive way. First, you should step back and think about what you want to say and why. Then reflect on with whom you are attempting to communicate.

WHAT STUDENTS SAY

1. Of the following methods, which is your preferred method of communication?
 - a. In person/face-to-face
 - b. Voice call
 - c. Video call
 - d. Email
 - e. Texting (including texting apps)
 - f. Social media environments
2. Which element of communication do you find most challenging?
 - a. Understanding the audience/situation and using the best form/tone to fit it
 - b. Speaking in front of a group of people
 - c. Writing papers or reports
 - d. Listening and interpreting
3. When writing a paper for a course, which aspect do you find most challenging?
 - a. Coming up with an original idea/thesis/research question
 - b. Finding sources and background information
 - c. Evaluating the quality of sources or data
 - d. Organizing the paper
 - e. Writing/editing the paper
 - f. Writing the bibliography/works cited list

You can also take the anonymous [What Students Say](#) surveys to add your voice to this textbook. Your responses will be included in updates.

Students offered their views on these questions, and the results are displayed in the graphs below.

Of the following methods, which is your preferred method of communication?

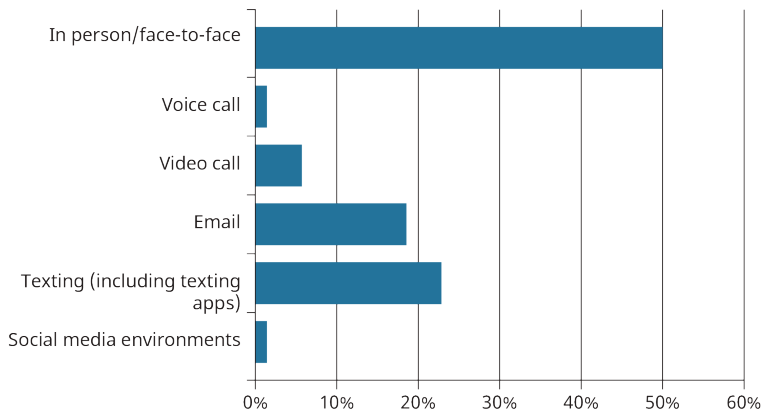


Figure 8.8

Which element of communication do you find most challenging?

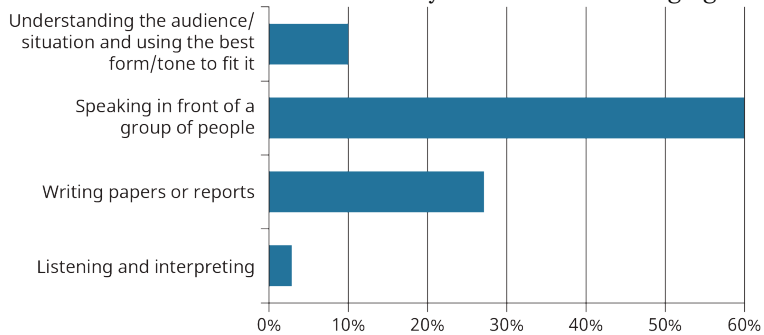


Figure 8.9

When writing a paper for a course, which aspect do you find most challenging?

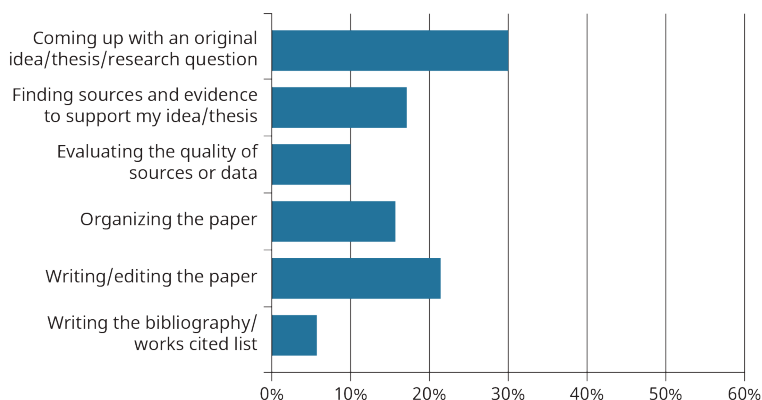


Figure 8.10

Emotional Intelligence

We've talked about emotional intelligence when it comes to listening. Recognizing your own emotions and those of others will help you avoid miscommunication as well. When you are aware of your own emotional state and you have the skills to address and adjust, your communication with others will improve. You're less likely to blurt out an angry retort to a perceived criticism, for example.

You're better able to manage communication when you recognize someone else's emotions, as well. A conversation can veer into hostile territory if someone feels attacked, or perhaps simply because they've had an emotional experience related to the conversation that you don't understand. Taking note of other people's emotional responses during a conversation and listening and speaking with empathy will help you manage the situation.

When conversations begin to feel heated, it's a good idea to pause and ask yourself why. If it's you who are feeling defensive and angry, make an effort to recognize the source of your frustration and try to take a step back, perhaps leaving the conversation until you're

better able to control your emotions and communicate in a way that's more clearheaded and calm.

If it's someone else who's emotional, again, ask yourself why. Can you see reasons that this person may feel attacked, belittled, or usurped? If you can recognize their emotion and address it, you may be able to get the communication back on solid footing.

ACTIVITY

Think of what context and what communication tool you would consider in the following situations:

1. You need to let your professor know you won't be able to hand in your assignment on time. What will you say, when and where will you say it, and what form of communication will you use and why?
2. Your roommate wants to have friends over for a party and you aren't sure you are up for that. What and how do you tell your roommate?
3. The weekend is full of activities, but you are expected home for a family gathering. How do you let your parents know you aren't coming?

Listening Is a Communication Action

Our communication includes both sending and, especially, receiving messages. Unfortunately, we often don't take the time to focus on the latter part. Often we are already thinking about what we are going to say next and not listening to what is being said to us. This lack of focus occurs in intense, oppositional discussions, but it can also be common in one-on-one conversations and when someone is

confiding in us. When we listen, we need to embrace the concept of empathy, meaning you understand what a person might be feeling, and understand why that person's actions made sense to them at the time. This way our ideas can be communicated in a way that makes sense to others, and it helps us understand others when they communicate with us.

Even though it is silent, listening is communication. We can often “hear” what is being said but don't really listen well enough to discern what is meant by the person trying to communicate with us. In order to listen effectively, we should consider it an active process, in the same way we think about speaking or messaging.

So what does active listening entail? There are some strategies you can use to help you become a good listener. First of all, stop talking. You can't listen if you are talking. Secondly, turn off the television, put your phone in your pocket, silence the music and, if needed, go somewhere quiet, so you can actually focus on what is being said. Next, have empathy for the person talking to you. In other words, don't begin thinking of ways to answer. Even if someone has a problem (with you or something else), avoid trying to immediately solve it; consider whether the person speaking to you really wants advice or action, or might simply want to be seen and heard. Finally, before you say anything as a reply, repeat what you heard so the other person can confirm that you heard them correctly. You would be amazed at how well these strategies work to help avoid misunderstandings and confusion.



Figure 8.11 Being a good listener takes practice and focus. To help, try to eliminate distraction and avoid giving too much advice or telling your own related stories. Even if you're only listening to a brief summary after running into someone in the hallway, do your best to internalize what they're saying. (Credit: University of the Fraser Valley / Flickr / Attribution 2.0 Generic (CC-BY 2.0))

Think about all the times you have gone through a drive-through for food or coffee. The scenario is most often the same, right? You order, let's say, medium fries, a burger with no cheese or onions, and a large soft drink. You then listen to the person inside the restaurant say back to you, "You want medium fries, a quarter pounder with no cheese or onions, and a large Coke." If that is the right order, you say yes and move on to pay. This can be seen as active listening on both sides. The following activity can help you reflect on active listening.

ANALYSIS QUESTION

This is an activity of self-analysis. As said above, listening and hearing are not the same thing, and the difference can often lead to

faulty communication. Think back on a time when your attempt at communicating with someone (face-to-face or online) didn't go the way you intended. The message you were trying to convey wasn't received in the way you meant it, and this led to some discord between you and whomever you were "talking" to. Write down what happened. Then think a bit about what could have been done differently. Was the problem yours? Did you send a message that wasn't very clear? Did the receiver of this message not really "listen" to what you were saying? What got in the way of what should have been just a simple bit of communication between you and someone else?

As said earlier, emotions are frequently involved in communication. It would be nice if everything was logical and everyone was always coming from that place of no emotion. But that's not how it works in most instances. People have opinions, needs, desires, and outcomes they are looking for; feelings that can be hurt; and differing attitudes. The list could go on and on. What is important is that we need to be aware of our own emotions, and those of others, when attempting to communicate. Consider other people's feelings as well as your own. Have empathy. And in the midst of trying to do that, listen, don't just hear!

10. Group Projects and Teamwork

LIZA LONG

Do you dread group projects? Maybe you've had a bad experience with one in the past, or you are concerned that you may have to do all the work. But in fact, group projects (also called project-based learning) model the real-world



Photo by [Jason Goodman](#) on [Unsplash](#)

environment of the workplace and help you to practice a variety of durable skills including communication, conflict management, collaboration, leadership, and time management

In fact, studies have shown that group projects can have a positive impact on student success in college. Here are a just a few of the benefits researchers have found for students who participate in group projects or project-based learning.

- **Improved learning outcomes:** Research has shown that group projects can lead to better learning outcomes compared to individual assignments. In group projects, students are more likely to engage in deeper learning, engage in meaningful discussions, and retain information better (Brindley et al., 2009).
- **Development of transferable skills:** Group projects can help students develop transferable skills, such as communication, collaboration, and problem-solving skills, which are valuable in both personal and professional life (Ornellas et al, 2019; Garnjost & Lawter, 2019).

- **Increased motivation and engagement:** Group projects can increase student motivation and engagement, as students are more likely to be invested in the project when they feel that their contributions matter (Hira & Anderson, 2021).
- **Higher student satisfaction:** Students who participate in group projects tend to report higher levels of satisfaction with their course and the learning experience (Lee et al., 2014).
- **Improved grades:** Studies have shown that students who participate in group projects tend to perform better academically compared to those who do individual assignments (Shimazoe & Aldrich, 2010).

As you can see, group projects can be an effective teaching strategy in college because group work can lead to improved learning outcomes, development of transferable skills, increased motivation and engagement, higher student satisfaction, and improved grades.

That's why I assign a group project in my English 211 Literary Analysis course. Students work together to produce [*Beginnings and Endings: A Critical Edition*](#). They each take different roles as part of the publication process. This open education resource is now used in college classrooms around the world, and students who participate in the project are able to add a publication credit to their résumés. The publication demonstrates how a group working together can create something much larger than an individual could create alone.

"Working on *Beginnings and Endings* was something I never thought I'd be doing even just a year ago," said one of my students, Liberal Arts major, Helen Neves. "Contributing to the publication with my group ended up being something both educational and fun. Knowing that future Literary Analysis students will see our work made the project even more exciting and worth the effort."

To learn more about how to make sure your group projects are a positive and productive experience, watch this short video.



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=149#oembed-1>

Then “jump in” to your Shark Tank discussion, and have fun working with your group to propose a new product or service in your field of study. You will find that you don’t have to dread group work. By treating group projects as practice for the workplace, you’ll be setting yourself up for success in your future career.

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PART IV

READING AND NOTETAKING

II. Reading and Notetaking: Introduction



Figure 5.1 Each of us reads and records information in our own way.

Student Survey

These questions will help you determine how the chapter concepts relate to you right now. As we are introduced to new concepts and practices, it can be informative to reflect on how your understanding changes over time. We'll revisit these questions at the end of the chapter to see whether your feelings have changed.

On a scale of 1 (I need significant improvement) to 4 (I'm doing great), reflect on how you're doing right now on these statements:

1. I am reading on a college level.
2. I take good notes that help me study for exams.
3. I understand how to manage all the reading I need to do for college.
4. I recognize the need for different notetaking strategies for different college subjects.

You can also take the [Chapter 5 survey](#) anonymously online.

STUDENT PROFILE

“Before I came to college, I always loathed reading from the textbook, taking notes during class, and even listening to lectures. I’ve since learned that in most cases I should do what my teacher suggests. I have a course that requires me to read two textbook chapters each week. Taking notes on the chapters is optional, making it easy to brush off these assignments. But there are reasons that professors tell students to read and do other classwork. They believe it is valuable information for a student to learn. Note taking in class may become tedious and, in some cases, feel redundant. But you can’t recall a whole class from memory. There is not much time to learn the contents of a class in one semester, and it can feel overwhelming. It’s important to take notes because writing them helps you remember.”

—**Christopher Naldini**, Westchester Community College

About this Chapter

In this chapter we will explore two skills you probably think you already understand—reading and notetaking. But the goal is to make sure you’ve honed these skills well enough to lead you to success in college. By the time you finish this chapter, you should be able to do the following:

- Discuss the way reading differs in college and how to successfully adapt to that change.
- Demonstrate the usefulness of strong notetaking for college students.

Reading and consuming information are increasingly important today because of the amount of information we encounter. Not only do we need to read critically and carefully, but we also need to read with an eye to distinguishing fact from opinion and identifying solid sources. Reading helps us make sense of the world—from simple reminders to pick up milk to complex treatises on global concerns, we read to comprehend, and in so doing, our brains expand. An interesting study from Emory University in Atlanta, Georgia, used MRI scans to track the brain conductivity while participants were reading. The researchers assert that a biological change to your brain actually happens when you read, and it lingers. If you want to read the study, published in the journal *Brain Connectivity*, you can find it online at <https://openstax.org/1/brainconnectivity>.

In academic settings, as we deliberately work to become stronger readers and better notetakers, we are both helping our current situation and enhancing our abilities to be successful in the future. Seems like a win-win. Take advantage of all the study aids you have at hand, including human, electronic, and physical resources, to increase your performance in these crucial skill sets.

Why? You need to read. It improves your thinking, your vocabulary, and your ability to make connections between disparate parts, which are all parts of critical thinking. Educational researchers Anne Cunningham and Keith Stanovich discovered after extensive study with college students that “reading volume [how much you read] made a significant contribution to multiple measures of vocabulary, general knowledge, spelling, and verbal fluency.”

Research continues to assess and support the fact that one of the most significant learning skills necessary for success in any field is reading. You may have performed this skill for decades already, but learning to do it more effectively and practicing the skill consistently is critical to how well you do in all subjects. If reading *isn't your thing*, strive to make that your challenge. Your academic journey, your personal well-being, and your professional endeavors will all benefit from your reading. Put forth the effort and

make it your thing. The long-term benefits will far outweigh the sacrifices you make now.

12. The Nature and Types of Reading

Questions to consider:

- What are the pros and cons of online reading?
- How can distinguishing between reading types help you academically and personally?
- How can you best prepare to read for college?

Research supports the idea that reading is good for you. Students who read at or above reading level throughout elementary and secondary school have a higher chance of starting—and more importantly, finishing—college. Educational researchers convincingly claim that reading improves everything from grades to vocabulary (Cunningham 2).

If you don't particularly enjoy reading, don't despair. We read for a variety of reasons, and you may just have to step back and take a bigger picture of your reading habits to understand why you avoid engaging in this important skill. The myriad distractions we now face as well as the intense information overload we can suffer on a daily basis in all aspects of our lives can combine to make it difficult to slow down to read, an activity that demands at least a modicum of attention in a way that most television and music do not. You may need to adjust your schedule for more reading time, especially in college, because every class you take will expect you to read more pages than you probably have in the past.

Types of Reading

We may read small items purely for immediate information, such

as notes, e-mails, or directions to an unfamiliar location. You can find all sorts of information online about how to fix a faucet or tie a secure knot. You won't have to spend too much time reading these sorts of texts because you have a specific goal in mind for them, and once you have accomplished that goal, you do not need to prolong the reading experience. These encounters with texts may not be memorable or stunning, but they don't need to be. When we consider why we read longer pieces—outside of reading for pleasure—we can usually categorize the reasons into about two categories: 1) reading to introduce ourselves to new content, and 2) reading to more fully comprehend familiar content.

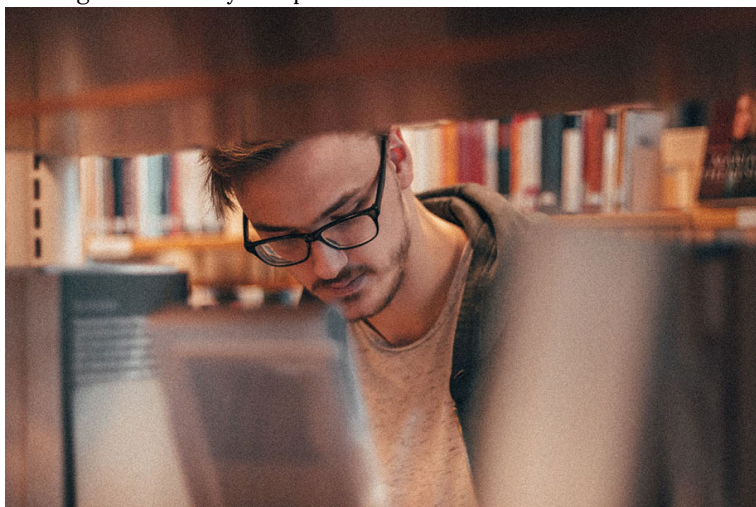


Figure 5.2 A bookstore or library can be a great place to explore. Aside from books and resources you need, you may find something that interests you or helps with your course work.

Reading to Introduce New Content

Glenn felt uncomfortable talking with his new roommates because he realized very quickly that he didn't know anything about their major—architecture. Of course he knew that it had something to do

with buildings and construction sites, but the field was so different from his discipline of biology that he decided he needed to find out more so he could at least engage in friendly conversation with his roommates. Since he would likely not go into their field, he didn't need to go into full research mode. When we read to introduce new content, we can start off small and increase to better and more sophisticated sources. Much of our further study and reading depends on the sources we originally read, our purpose for finding out about this new topic, and our interest level.

Chances are, you have done this sort of exploratory reading before. You may read reviews of a new restaurant or look at what people say about a movie you aren't sure you want to spend the money to see at the theater. This reading helps you decide. In academic settings, much of what you read in your courses may be relatively new content to you. You may have heard the word *volcano* and have a general notion of what it means, but until you study geology and other sciences in depth, you may not have a full understanding of the environmental origins, ecological impacts, and societal and historic responses to volcanoes. These perspectives will come from reading and digesting various material. When you are working with new content, you may need to schedule more time for reading and comprehending the information because you may need to look up unfamiliar terminology and you may have to stop more frequently to make sure you are truly grasping what the material means. When you have few ways to connect new material to your own prior knowledge, you have to work more diligently to comprehend it.

APPLICATION

Try an experiment with a group of classmates. Without looking on the Internet, try to brainstorm a list of 10 topics about which all of you may be interested but for which you know very little or

nothing at all. Try to make the topics somewhat obscure rather than ordinary—for example, the possibility of the non-planet Pluto being reclassified again as opposed to something like why we need to drink water.

After you have this random list, think of ways you could find information to read about these weird topics. Our short answer is always: Google. But think of other ways as well. How else could you read about these topics if you don't know anything about them? You may well be in a similar circumstance in some of your college classes, so you should listen carefully to your classmates on this one. Think beyond pat answers such as "I'd go to the library," and press for what that researcher would do once at the library. What types of articles or books would you try to find? One reason that you should not always ignore the idea of doing research at the physical library is because once you are there and looking for information, you have a vast number of other sources readily available to you in a highly organized location. You also can tap into the human resources represented by the research librarians who likely can redirect you if you cannot find appropriate sources.

Reading to Comprehend Familiar Content

Reading about unfamiliar content is one thing, but what if you do know something about a topic already? Do you really still need to keep reading about it? Probably. For example, what if during the brainstorming activity in the previous section, you secretly felt rather smug because you know about the demotion of the one-time planet Pluto and that there is currently quite the scientific debate going on about that whole de-planet-ation thing. Of course, you didn't say anything during the study session, mostly to spare your classmates any embarrassment, but you are pretty familiar with Pluto-gate. So now what? Can you learn anything new?

Again—probably. When did Pluto's qualifications to be considered a planet come into question? What are the qualifications for being

considered a planet? Why? Who even gets to decide these things? Why was it called *Pluto* in the first place? On Amazon alone, you can find hundreds of books about the once-planet Pluto (not to be confused with the Disney dog also named Pluto). A Google search brings up over 34 million options for your reading pleasure. You'll have plenty to read, even if you do know something or quite a bit about a topic, but you'll approach reading about a familiar topic and an unfamiliar one differently.

With familiar content, you can do some initial skimming to determine what you already know in the book or article, and mark what may be new information or a different perspective. You may not have to give your full attention to the information you know, but you will spend more time on the new viewpoints so you can determine how this new data meshes with what you already know. Is this writer claiming a radical new definition for the topic or an entirely opposite way to consider the subject matter, connecting it to other topics or disciplines in ways you have never considered?

When college students encounter material in a discipline-specific context and have some familiarity with the topic, they sometimes can allow themselves to become a bit overconfident about their knowledge level. Just because a student may have read an article or two or may have seen a TV documentary on a subject such as the criminal mind, that does not make them an expert. What makes an expert is a person who thoroughly studies a subject, usually for years, and understands all the possible perspectives of a subject as well as the potential for misunderstanding due to personal biases and the availability of false information about the topic.

13. Effective Reading Strategies

College—and learning more generally—is really about excelling at three basic things: taking in a lot of information, tracking and digesting that information, and doing something with that information later. Technology is transforming all of these stages in remarkable ways, but the fundamentals remain. You need to have methods that optimize for each of these stages and, if possible, figure out how to leverage emerging technologies in ways that make them fit your style the best.

This chapter will introduce certain principles and practical tips for the first stage: taking in information. The principles are key. The tips are useful for seeing what many people have learned over time, but ultimately it's up to you to figure out what works.

Allowing Adequate Time for Reading

College requires *a lot* of reading and information consumption. All of us learn to become “infovores” during this period of our lives—and the benefits are enormous for lifelong learning. It also takes time.

You should determine the reading requirements and expectations for every class very early in the semester. You also need to understand why you are reading the particular text you are assigned. Do you need to read closely for minute details that determine cause and effect? Or is your instructor asking you to skim several sources so you become more familiar with the topic? Knowing this reasoning will help you decide your timing, what notes to take, and how best to undertake the reading assignment.



Figure 5.3 If you plan to make time for reading while you commute, remember that unexpected events like delays and cancellations could impact your concentration.

Depending on the makeup of your schedule, you may end up reading both primary sources—such as legal documents, historic letters, or diaries—as well as textbooks, articles, and secondary sources, such as summaries or argumentative essays that use primary sources to stake a claim. You may also need to read current journalistic texts to stay current in local or global affairs. A realistic approach to scheduling your time to allow you to read and review all the reading you have for the semester will help you accomplish what can sometimes seem like an overwhelming task.

When you allow adequate time in your hectic schedule for reading, you are investing in your own success. Reading isn't a magic pill, but it may seem like it when you consider all the benefits people reap from this ordinary practice. Famous successful people throughout history have been voracious readers. In fact, former U.S. president Harry Truman once said, "Not all readers are leaders, but all leaders are readers." Writer of the U.S. Declaration of Independence, inventor, and also former U.S. president Thomas Jefferson claimed "I cannot live without books" at a time when keeping and reading books was an expensive pastime. Knowing what it meant to be kept from the joys of reading, 19th-century abolitionist Frederick Douglass said, "Once you learn to read, you

will be forever free.” And finally, George R. R. Martin, the prolific author of the wildly successful *Game of Thrones* empire, declared, “A reader lives a thousand lives before he dies . . . The man who never reads lives only one.”

You can make time for reading in a number of ways that include determining your usual reading pace and speed, scheduling active reading sessions, and practicing recursive reading strategies.

Determining Reading Speed and Pacing

To determine your reading speed, select a section of text—passages in a textbook or pages in a novel. Time yourself reading that material for exactly 5 minutes, and note how much reading you accomplished in those 5 minutes. Multiply the amount of reading you accomplished in 5 minutes by 12 to determine your average reading pace (5 times 12 equals the 60 minutes of an hour). Of course, your reading pace will be different and take longer if you are taking notes while you read, but this calculation of reading pace gives you a good way to estimate your reading speed that you can adapt to other forms of reading.

Example Reading Times			
Reader	Pages Read in 5 Minutes	Pages per Hour	Approximate Hours to Read 500 Pages
Marta	4	48	10 hours, 30 minutes
Jordi	3	36	13 hours
Estevan	5	60	8 hours, 20 minutes

So, for instance, if Marta was able to read 4 pages of a dense novel for her English class in 5 minutes, she should be able to read about 48 pages in one hour. Knowing this, Marta can accurately determine how much time she needs to devote to finishing the novel within a set amount of time, instead of just guessing. If the novel Marta is

reading is 497 pages, then Marta would take the total page count (497) and divide that by her hourly reading rate (48 pages/hour) to determine that she needs about 10 to 11 hours overall. To finish the novel spread out over two weeks, Marta needs to read a little under an hour a day to accomplish this goal.

Calculating your reading rate in this manner does not take into account days where you're too distracted and you have to reread passages or days when you just aren't in the mood to read. And your reading rate will likely vary depending on how dense the content you're reading is (e.g., a complex textbook vs. a comic book). Your pace may slow down somewhat if you are not very interested in what the text is about. What this method *will* help you do is be realistic about your reading time as opposed to waging a guess based on nothing and then becoming worried when you have far more reading to finish than the time available.

Scheduling Set Times for Active Reading

Active reading takes longer than reading through passages without stopping. You may not need to read your latest sci-fi series actively while you're lounging on the beach, but many other reading situations demand more attention from you. Active reading is particularly important for college courses. You are a scholar actively engaging with the text by posing questions, seeking answers, and clarifying any confusing elements. Plan to spend at least twice as long to read actively than to read passages without taking notes or otherwise marking select elements of the text.

To determine the time you need for active reading, use the same calculations you use to determine your traditional reading speed and double it. Remember that you need to determine your reading pace for all the classes you have in a particular semester and multiply your speed by the number of classes you have that require different types of reading.

Example Active Reading Times				
Reader	Pages Read in 5 Minutes	Pages per Hour	Approximate Hours to Read 500 Pages	Approximate Hours to Actively Read 500 Pages
Marta	4	48	10 hours, 30 minutes	21 hours
Jordi	3	36	13 hours	26 hours
Estevan	5	60	8 hours, 20 minutes	16 hours, 40 minutes

Practicing Recursive Reading Strategies

One fact about reading for college courses that may become frustrating is that, in a way, it never ends. For all the reading you do, you end up doing even more rereading. It may be the same content, but you may be reading the passage more than once to detect the emphasis the writer places on one aspect of the topic or how frequently the writer dismisses a significant counterargument. This rereading is called recursive reading.

For most of what you read at the college level, you are trying to make sense of the text for a specific purpose—not just because the topic interests or entertains you. You need your full attention to decipher everything that’s going on in complex reading material—and you even need to be considering what the writer of the piece may not be including and why. This is why reading for comprehension is recursive.

Specifically, this boils down to seeing reading not as a formula but as a process that is far more circular than linear. You may read a selection from beginning to end, which is an excellent starting point, but for comprehension, you’ll need to go back and reread passages to determine meaning and make connections between the reading and the bigger learning environment that led you to the selection—that may be a single course or a program in your

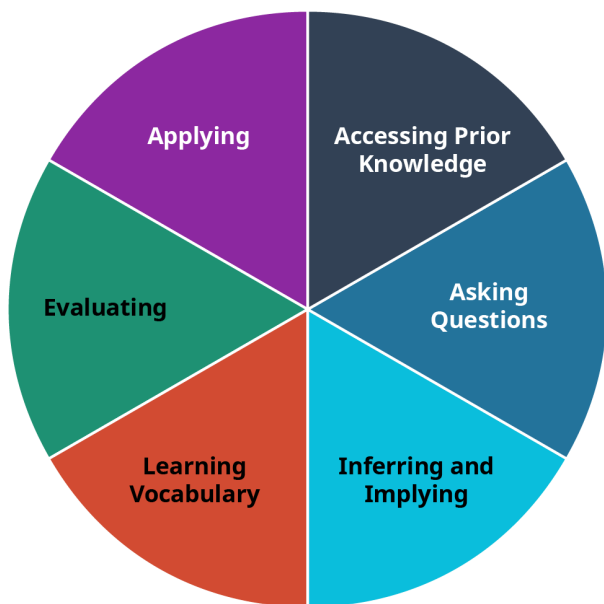
college, or it may be the larger discipline, such as all biologists or the community of scholars studying beach erosion.

People often say writing is rewriting. For college courses, reading is rereading.

Strong readers engage in numerous steps, sometimes combining more than one step simultaneously, but knowing the steps nonetheless. They include, not always in this order:

- bringing any prior knowledge about the topic to the reading session,
- asking yourself pertinent questions, both orally and in writing, about the content you are reading,
- inferring and/or implying information from what you read,
- learning unfamiliar discipline-specific terms,
- evaluating what you are reading, and eventually,
- applying what you're reading to other learning and life situations you encounter.

Let's break these steps into manageable chunks, because you are actually doing quite a lot when you read.



*Figure 5.4
The six
elements of
recursive
reading
should be
considered
as a circular,
not linear,
process.*

Applying

When you learn something new, it always connects to other knowledge you already have. One challenge we have is applying new information. It may be interesting to know the distance to the moon, but how do we apply it to something we need to do? If your biology instructor asked you to list several challenges of colonizing Mars and you do not know much about that planet's exploration, you may be able to use your knowledge of how far Earth is from the moon to apply it to the new task. You may have to read several other texts in addition to reading graphs and charts to find this information.

That was the challenge the early space explorers faced along with myriad unknowns before space travel was a more regular occurrence. They had to take what they already knew and could study and read about and apply it to an unknown situation. These

explorers wrote down their challenges, failures, and successes, and now scientists read those texts as a part of the ever-growing body of text about space travel. Application is a sophisticated level of thinking that helps turn theory into practice and challenges into successes.

Preparing to Read for Specific Disciplines in College

Different disciplines in college may have specific expectations, but you can depend on all subjects asking you to read to some degree. In this college reading requirement, you can succeed by learning to read actively, researching the topic and author, and recognizing how your own preconceived notions affect your reading. Reading for college isn't the same as reading for pleasure or even just reading to learn something on your own because you are casually interested.

In college courses, your instructor may ask you to read articles, chapters, books, or *primary sources* (those original documents about which we write and study, such as letters between historic figures or the Declaration of Independence). Your instructor may want you to have a general background on a topic before you dive into that subject in class so that you know the history of a topic, can start thinking about it, and can engage in a class discussion with more than a passing knowledge of the issue.

If you are about to participate in an in-depth six-week consideration of the U.S. Constitution but have never read it or anything written about it, you will have a hard time looking at anything in detail or understanding how and why it is significant. As you can imagine, a great deal has been written about the Constitution by scholars and citizens since the late 1700s when it was first put to paper (that's how they did it then). While the actual document isn't that long (about 12–15 pages depending on how it is presented), learning the details on how it came about,

who was involved, and why it was and still is a significant document would take a considerable amount of time to read and digest. So, how do you do it all? Especially when you may have an instructor who drops hints that you may also *love* to read a historic novel covering the same time period . . . in your *spare time*, not required, of course! It can be daunting, especially if you are taking more than one course that has time-consuming reading lists. With a few strategic techniques, you can manage it all, but know that you must have a plan and schedule your required reading so you *are* also able to pick up that recommended historic novel—it may give you an entirely new perspective on the issue.

Strategies for Reading in College Disciplines

No universal law exists for how much reading instructors and institutions expect college students to undertake for various disciplines. Suffice it to say, it's a LOT.

For most students, it is the volume of reading that catches them most off guard when they begin their college careers. A full course load might require 10–15 hours of reading per week, some of that covering content that will be more difficult than the reading for other courses.

You cannot possibly read word-for-word every single document you need to read for all your classes. That doesn't mean you give up or decide to only read for your favorite classes or concoct a scheme to read 17 percent for each class and see how that works for you. You need to learn to skim, annotate, and take notes. All of these techniques will help you comprehend more of what you read, which is why we read in the first place. We'll talk more later about annotating and notetaking, but for now consider what you know about skimming as opposed to active reading.

Skimming

Skimming is not just glancing over the words on a page (or screen) to see if any of it sticks. Effective skimming allows you to take in the major points of a passage without the need for a time-consuming reading session that involves your active use of notations and annotations. Often you will need to engage in that painstaking level of active reading, but skimming is the first step—not an alternative to deep reading. The fact remains that neither do you need to read everything nor could you possibly accomplish that given your limited time. So learn this valuable skill of skimming as an accompaniment to your overall study tool kit, and with practice and experience, you will fully understand how valuable it is.

When you skim, look for guides to your understanding: headings, definitions, pull quotes, tables, and context clues. Textbooks are often helpful for skimming—they may already have made some of these skimming guides in bold or a different color, and chapters often follow a predictable outline. Some even provide an overview and summary for sections or chapters. Use whatever you can get, but don't stop there. In textbooks that have some reading guides, or especially in text that does not, look for introductory words such as *First* or *The purpose of this article . . .* or summary words such as *In conclusion . . .* or *Finally*. These guides will help you read only those sentences or paragraphs that will give you the overall meaning or gist of a passage or book.

Now move to the meat of the passage. You want to take in the reading as a whole. For a book, look at the titles of each chapter if available. Read each chapter's introductory paragraph and determine why the writer chose this particular order. Depending on what you're reading, the chapters may be only informational, but often you're looking for a specific argument. What position is the writer claiming? What support, counterarguments, and conclusions is the writer presenting?

Don't think of skimming as a way to buzz through a boring reading assignment. It is a skill you should master so you can engage, at various levels, with all the reading you need to accomplish in college. End your skimming session with a few notes—terms to look

up, questions you still have, and an overall summary. And recognize that you likely will return to that book or article for a more thorough reading if the material is useful.

Active Reading Strategies

Active reading differs significantly from skimming or reading for pleasure. You can think of active reading as a sort of conversation between you and the text (maybe between you and the author, but you don't want to get the author's personality too involved in this metaphor because that may skew your engagement with the text).

When you sit down to determine what your different classes expect you to read and you create a reading schedule to ensure you complete all the reading, think about when you should read the material strategically, not just how to *get it all done*. You should read textbook chapters and other reading assignments *before* you go into a lecture about that information. Don't wait to see how the lecture goes before you read the material, or you may not understand the information in the lecture. Reading before class helps you put ideas together between your reading and the information you hear and discuss in class.

Different disciplines naturally have different types of texts, and you need to take this into account when you schedule your time for reading class material. For example, you may look at a poem for your world literature class and assume that it will not take you long to read because it is relatively short compared to the dense textbook you have for your economics class. But reading and understanding a poem can take a considerable amount of time when you realize you may need to stop numerous times to review the separate word meanings and how the words form images and connections throughout the poem.

The SQ3R Reading Strategy

You may have heard of the **SQ3R** method for active reading in your early education. This valuable technique is perfect for college reading. The title stands for **S**urvey, **Q**uestion, **R**ead, **R**ecite, **R**evue, and you can use the steps on virtually any assigned passage. Designed by Francis Pleasant Robinson in his 1961 book *Effective Study*, the active reading strategy gives readers a systematic way to work through any reading material.

Survey is similar to skimming. You look for clues to meaning by reading the titles, headings, introductions, summary, captions for graphics, and keywords. You can survey almost anything connected to the reading selection, including the copyright information, the date of the journal article, or the names and qualifications of the author(s). In this step, you decide what the general meaning is for the reading selection.

Question is your creation of questions to seek the main ideas, support, examples, and conclusions of the reading selection. Ask yourself these questions separately. Try to create valid questions about what you are about to read that have come into your mind as you engaged in the Survey step. Try turning the headings of the sections in the chapter into questions. Next, how does what you're reading relate to you, your school, your community, and the world?

Read is when you actually read the passage. Try to find the answers to questions you developed in the previous step. Decide how much you are reading in

chunks, either by paragraph for more complex readings or by section or even by an entire chapter. When you finish reading the selection, stop to make notes. Answer the questions by writing a note in the margin or other white space of the text.

You may also carefully underline or highlight text in addition to your notes. Use caution here that you don't try to rush this step by haphazardly circling terms or the other extreme of underlining huge chunks of text. Don't over-mark. You aren't likely to remember what these cryptic marks mean later when you come back to use this active reading session to study. The text is the source of information—your marks and notes are just a way to organize and make sense of that information.

Recite means to speak out loud. By reciting, you are engaging other senses to remember the material—you read it (visual) and you said it (auditory). Stop reading momentarily in the step to answer your questions or clarify confusing sentences or paragraphs. You can recite a summary of what the text means to you. If you are not in a place where you can verbalize, such as a library or classroom, you can accomplish this step adequately by *saying* it in your head; however, to get the biggest bang for your buck, try to find a place where you can speak aloud. You may even want to try explaining the content to a friend.

Review is a recap. Go back over what you read and add more notes, ensuring you have captured the main points of the passage, identified the supporting evidence and examples, and understood the overall meaning. You may need to repeat some or all of the

SQR3 steps during your review depending on the length and complexity of the material. Before you end your active reading session, write a short (no more than one page is optimal) summary of the text you read.

Reading Primary and Secondary Sources

Primary sources are original documents we study and from which we glean information; primary sources include letters, first editions of books, legal documents, and a variety of other texts. When scholars look at these documents to understand a period in history or a scientific challenge and then write about their findings, the scholar's article is considered a secondary source. Readers have to keep several factors in mind when reading both primary and secondary sources.

Primary sources may contain dated material we now know is inaccurate. It may contain personal beliefs and biases the original writer didn't intent to be openly published, and it may even present fanciful or creative ideas that do not support current knowledge. Readers can still gain great insight from primary sources, but readers need to understand the context from which the writer of the primary source wrote the text.

Likewise, secondary sources are inevitably another person's perspective on the primary source, so a reader of secondary sources must also be aware of potential biases or preferences the secondary source writer inserts in the writing that may persuade an incautious reader to interpret the primary source in a particular manner.

For example, if you were to read a secondary source that is

examining the U.S. Declaration of Independence (the primary source), you would have a much clearer idea of how the secondary source scholar presented the information from the primary source if you also read the Declaration for yourself instead of trusting the other writer's interpretation. Most scholars are honest in writing secondary sources, but you as a reader of the source are trusting the writer to present a balanced perspective of the primary source. When possible, you should attempt to read a primary source in conjunction with the secondary source. The Internet helps immensely with this practice.

Tools for Making Reading More Accessible

The difference between college now and previous experiences is that you now have a range of tools at your fingertips that can make reading more accessible and relevant. Many students use YouTube to get a variety of introductions to a topic that seems unclear from a textbook.

You're probably familiar with Googling information, but emerging AI technologies, such as ChatGPT, have been trained on the very textbooks you use in class (or the information those textbooks are derived from). AI chatbots can be used to help explain information in ways that you find relevant and accessible.

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14. Taking Notes

Questions to consider:

- How can you prepare to take notes to maximize the effectiveness of the experience?
- What are some specific strategies you can employ for better notetaking?
- Why is annotating your notes after the notetaking session a critical step to follow?

Beyond providing a record of the information you are reading or hearing, notes help you organize the ideas and help you make meaning out of something about which you may not be familiar, so notetaking and reading are two compatible skill sets. Taking notes also helps you stay focused on the question at hand. Nanami often takes notes during presentations or class lectures so she can follow the speaker's main points and condense the material into a more readily usable format. Strong notes build on your prior knowledge of a subject, help you discuss trends or patterns present in the information, and direct you toward areas needing further research or reading.



Figure 5.9 Strong notes build on your prior knowledge of a subject, help you discuss trends or patterns present in the information, and direct you toward areas needing further research or reading.

It is not a good habit to transcribe every single word a speaker utters—even if you have an amazing ability to do that. Most of us don't have that court-reporter-esque skill level anyway, and if we try, we would end up missing valuable information. Learn to listen for main ideas and distinguish between these main ideas and details

that typically support the ideas. Include examples that explain the main ideas, but do so using understandable abbreviations.

Think of all notes as potential study guides. In fact, if you only take notes without actively working on them after the initial notetaking session, the likelihood of the notes helping you is slim. Research on this topic concludes that without active engagement after taking notes, most students forget 60–75 percent of material over which they took the notes—within two days! That sort of defeats the purpose, don't you think? This information about memory loss was first brought to light by 19th-century German psychologist Hermann Ebbinghaus. Fortunately, you do have the power to thwart what is sometimes called the Ebbinghaus Forgetting Curve by reinforcing what you learned through review at intervals shortly after you take in the material and frequently thereafter.

If you are a musician, you'll understand this phenomenon well. When you first attempt a difficult piece of music, you may not remember the chords and notes well at all, but after frequent practice and review, you generate a certain muscle memory and cognitive recall that allows you to play the music more easily.

Notetaking may not be the most glamorous aspect of your higher-education journey, but it is a study practice you will carry throughout college and into your professional life. Setting yourself up for successful notetaking is almost as important as the actual taking of notes, and what you do after your notetaking session is equally significant. Well-written notes help you organize your thoughts, enhance your memory, and participate in class discussion, and they prepare you to respond successfully on exams. With all that riding on your notes, it would behoove you to learn how to take notes properly and continue to improve your notetaking skills.

ANALYSIS QUESTION

Do you currently have a preferred way to take notes? When did you start using it? Has it been effective? What other strategy might work for you?

Preparing to Take Notes

Preparing to take notes means more than just getting out your laptop or making sure you bring pen and paper to class. You'll do a much better job with your notes if you understand why we take notes, have a strong grasp on your preferred notetaking system, determine your specific priorities depending on your situation, and engage in some version of efficient shorthand.

Like handwriting and fingerprints, we all have unique and fiercely independent notetaking habits. These understandably and reasonably vary from one situation to the next, but you can only improve your skills by learning more about ways to take effective notes and trying different methods to find a good fit.

The very best notes are the ones you take in an organized manner that encourages frequent review and use as you progress through a topic or course of study. For this reason, you need to develop a way to organize all your notes for each class so they remain together and organized. As old-fashioned as it sounds, a clunky three-ring binder is an excellent organizational container for class notes. You can easily add to previous notes, insert handouts you may receive in class, and maintain a running collection of materials for each separate course. If the idea of carrying around a heavy binder has you rolling your eyes, then transfer that same structure into your computer files. If you don't organize your many documents into some semblance of order on your computer, you will waste significant time searching for improperly named or saved files.

You may be interested in relatively new research on what is the more effective notetaking strategy: handwriting versus typing directly into a computer. While individuals have strong personal opinions on this subject, most researchers agree that the format of student notes is less important than what students do with the notes they take afterwards. Both handwriting notes and using a computer for notetaking have pros and cons.

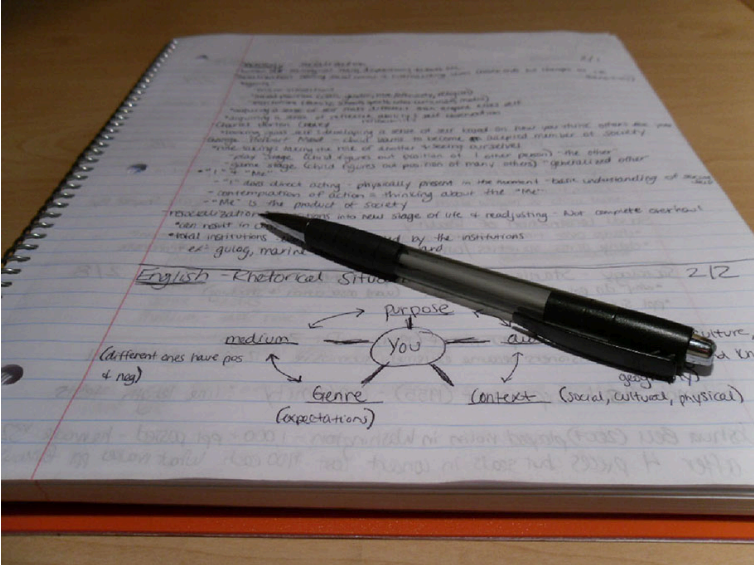


Figure 5.10 The best notes are the ones you take in an organized manner. Frequent review and further annotation are important to build a deep and useful understanding of the material. (Credit: English106 / Flickr / Attribution 2.0 Generic (CC-BY 2.0))

Managing Notetaking Systems (Computer, Paper/Pen, Note Cards, Textbook)

Whichever of the many notetaking systems you choose (and new ones seem to come out almost daily), the very best one is the one that you will use consistently. The skill and art of notetaking is not

automatic for anyone; it takes a great deal of practice, patience, and continuous attention to detail. Add to that the fact that you may need to master multiple notetaking techniques for different classes, and you have some work to do. Unless you are specifically directed by your instructor, you are free to combine the best parts of different systems if you are most comfortable with that hybrid system.

Just to keep yourself organized, all your notes should start off with an identifier, including at the very least the date, the course name, the topic of the lecture/presentation, and any other information you think will help you when you return to use the notes for further study, test preparation, or assignment completion. Additional, optional information may be the number of notetaking sessions about this topic or reminders to cross-reference class handouts, textbook pages, or other course materials. It's also always a good idea to leave some blank space in your notes so you can insert additions and questions you may have as you review the material later.

Notetaking Strategies

You may have a standard way you take all your notes for all your classes. When you were in high school, this one-size-fits-all approach may have worked. Now that you're in college, reading and studying more advanced topics, your general method may still work some of the time, but you should have some different strategies in place if you find that your method isn't working as well with college content. You probably will need to adopt different notetaking strategies for different subjects. The strategies in this section represent various ways to take notes in such a way that you are able to study after the initial notetaking session.

Cornell Method

One of the most recognizable notetaking systems is called the *Cornell Method*, a relatively simple way to take effective notes devised by Cornell University education professor Dr. Walter Pauk in the 1940s. In this system, you take a standard piece of note paper and divide it into three sections by drawing a horizontal line across your paper about one to two inches from the bottom of the page (the summary area) and then drawing a vertical line to separate the rest of the page above this bottom area, making the left side about two inches (the recall column) and leaving the biggest area to the right of your vertical line (the notes column). You may want to make one page and then copy as many pages as you think you'll need for any particular class, but one advantage of this system is that you can generate the sections quickly. Because you have divided up your page, you may end up using more paper than you would if you were writing on the entire page, but the point is not to keep your notes to as few pages as possible. The Cornell Method provides you with a well-organized set of notes that will help you study and review your notes as you move through the course. If you are taking notes on your computer, you can still use the Cornell Method in Word or Excel on your own or by using a template someone else created.

Topic/Objective:		Name:	
		Class/Period:	
		Date:	
Essential Question:			
Questions:		Notes:	
Summary:			

Figure 5.11 The Cornell Method provides a straightforward, organized, and flexible approach

Now that you have the notetaking format generated, the beauty of the Cornell Method is its organized simplicity. Just write on one side of the page (the right-hand notes column)—this will help later when you are reviewing and revising your notes. During your notetaking session, use the notes column to record information over the main points and concepts of the lecture; try to put the ideas into your own words, which will help you not transcribe the speaker’s words verbatim. Skip lines between each idea in this column. Practice the shortcut abbreviations covered in the next section and avoid writing

in complete sentences. Don't make your notes too cryptic, but you can use bullet points or phrases equally well to convey meaning—we do it all the time in conversation. If you know you will need to expand the notes you are taking in class but don't have time, you can put reminders directly in the notes by adding and underlining the word *expand* by the ideas you need to develop more fully.

As soon as possible after your notetaking session, preferably within eight hours but no more than twenty-four hours, read over your notes column and fill in any details you missed in class, including the places where you indicated you wanted to expand your notes. Then in the recall column, write any key ideas from the corresponding notes column—you can't stuff this smaller recall column as if you're explaining or defining key ideas. Just add the one- or two-word main ideas; these words in the recall column serve as cues to help you remember the detailed information you recorded in the notes column.

Once you are satisfied with your notes and recall columns, summarize this page of notes in two or three sentences using the summary area at the bottom of the sheet. This is an excellent time to get with another classmate or a group of students who all heard the same lecture to make sure you all understood the key points. Now, before you move onto something else, cover the large notes column, and quiz yourself over the key ideas you recorded in the recall column. Repeat this step often as you go along, not just immediately before an exam, and you will help your memory make the connections between your notes, your textbook reading, your in-class work, and assignments that you need to succeed on any quizzes and exams.

Academic Essay Elements	
Topic	Topic <ul style="list-style-type: none"> – Establishes context – Limits scope of essay – Introduces Issue/Problem
Thesis	Thesis <ul style="list-style-type: none"> – Central argument or point of paper – Arrives early in paper—usually toward end of first paragraph (maybe a bit later in longer papers) – Focused, clear, and specific – Reflects writer's position on the topic/issue
Supporting Details	Supporting Detail Paragraphs <ul style="list-style-type: none"> – Each paragraph has a specific topic – Clarify, explain, illustrate, expand on topic – Provide EVIDENCE—quotes, data, references <u>Cite everything properly!</u>
Conclusion	Conclusion <ul style="list-style-type: none"> – Tie back to intro/thesis – Show how details supported the argument – Why is it important? – Point to implications/outcomes, but don't introduce entirely new ideas
Use the structure, but don't follow it too rigidly. The most important pieces are a strong thesis and good evidence to back it up. The conclusion should not just summarize—take it a little further.	

Figure 5.12 This sample set of notes in the Cornell Method is designed to make sense of a large amount of information. The process of organizing the notes can help you retain the information more effectively than less consistent methods.

The main advantage of the Cornell Method is that you are setting yourself up to have organized, workable notes. The neat format helps you move into study-mode without needing to re-copy less organized notes or making sense of a large mass of information you aren't sure how to process because you can't remember key ideas or what you meant. If you write notes in your classes without any sort of system and later come across something like "Napoleon—short" in the middle of a glob of notes, what can you do at this point? Is

that important? Did it connect with something relevant from the lecture? How would you possibly know? You are your best advocate for setting yourself up for success in college.

Outlining

Other note organizing systems may help you in different disciplines. You can take notes in a formal outline if you prefer, using Roman numerals for each new topic, moving down a line to capital letters indented a few spaces to the right for concepts related to the previous topic, then adding details to support the concepts indented a few more spaces over and denoted by an Arabic numeral. You can continue to add to a formal outline by following these rules.

You don't absolutely have to use the formal numerals and letter, but you have to then be careful to indent so you can tell when you move from a higher level topic to the related concepts and then to the supporting information. The main benefit of an outline is how organized it is. You have to be on your toes when you are taking notes in class to ensure you keep up the organizational format of the outline, which can be tricky if the lecture or presentation is moving quickly or covering many diverse topics.

The following formal outline example shows the basic pattern:

- I. Dogs (*main topic—usually general*)
 - A. German Shepherd (*concept related to main topic*)
 - 1. Protection (*supporting info about the concept*)
 - 2. Assertive
 - 3. Loyal
 - B. Weimaraner (*concept related to main topic*)
 - 1. Family-friendly (*supporting info about the concept*)
 - 2. Active
 - 3. Healthy
- II. Cats (*main topic*)

Siamese

You would just continue on with this sort of numbering and indenting format to show the connections between main ideas, concepts, and supporting details. Whatever details you do not capture in your notetaking session, you can add after the lecture as you review your outline.

Chart or table

Similar to creating an outline, you can develop a chart to compare and contrast main ideas in a notetaking session. Divide your paper into four or five columns with headings that include either the main topics covered in the lecture or categories such as How?, What?, When used?, Advantages/Pros, Disadvantages/Cons, or other divisions of the information. You write your notes into the appropriate columns as that information comes to light in the presentation.

Example of a Chart to Organize Ideas and Categories			
Structure	Types	Functions in Body	Additional Notes
Carbohydrates			
Lipids			
Proteins			
Nucleic Acid			

This format helps you pull out the salient ideas and establishes an organized set of notes to study later. (If you haven't noticed that this *reviewing later* idea is a constant across all notetaking systems, you should...take note of that.) Notes by themselves that you never reference again are little more than scribbles. That would be a bit like compiling an extensive grocery list so you stay on budget when

you shop, work all week on it, and then just throw it away before you get to the store. You may be able to recall a few items, but likely won't be as efficient as you could be if you had the notes to reference. Just as you cannot read all the many books, articles, and documents you need to peruse for your college classes, you cannot remember the most important ideas of all the notes you will take as part of your courses, so you must review.

Concept Mapping and Visual Notetaking

One final notetaking method that appeals to learners who prefer a visual representation of notes is called *mapping* or sometimes *mind mapping* or *concept mapping*, although each of these names can have slightly different uses. Variations of this method abound, so you may want to look for more versions online, but the basic principles are that you are making connections between main ideas through a graphic depiction; some can get rather elaborate with colors and shapes, but a simple version may be more useful at least to begin. Main ideas can be circled or placed in a box with supporting concepts radiating off these ideas shown with a connecting line and possibly details of the support further radiating off the concepts. You can present your main ideas vertically or horizontally, but turning your paper long-ways, or in landscape mode, may prove helpful as you add more main ideas.

you, stick with it. You will become more efficient with the method the more you use it, and your notetaking, review, and test prep will become, if not easier, certainly more organized, which can delete decrease your anxiety.

Practicing Decipherable Shorthand

Most college students don't take a class in shorthand, once the domain of secretaries and executive assistants, but maybe they should. That almost-lost art in the age of computers could come in very handy during intense notetaking sessions. Elaborate shorthand systems do exist, but you would be better served in your college notetaking adventures to hone a more familiar, personalized form of shorthand to help you write more in a shorter amount of time. Seemingly insignificant shortcuts can add up to ease the stress notetaking can induce—especially if you ever encounter an “I’m not going to repeat this” kind of presenter! Become familiar with these useful abbreviations:

Shortcut symbol	Meaning
w/, w/o, w/in	with, without, within
&	and
#	number
b/c	because
X, $\sqrt{}$	incorrect, correct
Diff	different, difference
etc.	and so on
ASAP	as soon as possible
US, UK	United States, United Kingdom
info	information
Measurements: ft, in, k, m	foot, inch, thousand, million
¶	paragraph or new paragraph
Math symbols: =, +, >, <, \div	equal, plus, greater, less, divided by
WWI, WWII	World Wars I and II
impt	important
?, !, **	denote something is very significant; don't over use

Do you have any other shortcuts or symbols that you use in your notes? Ask your parents if they remember any that you may be able to learn.

Annotating Notes After Initial Notetaking Session

Annotating notes after the initial notetaking session may be one of the most valuable study skills you can master. Whether you are

highlighting, underlining, or adding additional notes, you are reinforcing the material in your mind and memory.

Admit it—who can resist highlighting markers? Gone are the days when yellow was the star of the show, and you had to be very careful not to press too firmly for fear of obliterating the words you were attempting to emphasize. Students now have a veritable rainbow of highlighting options and can color-code notes and text passages to their hearts' content. Technological advances may be important, but highlighter color choice is monumental! Maybe.

The only reason to highlight anything is to draw attention to it, so you can easily pick out that ever-so-important information later for further study or reflection. One problem many students have is not knowing when to stop. If what you need to recall from the passage is a particularly apt and succinct definition of the term important to your discipline, highlighting the entire paragraph is less effective than highlighting just the actual term. And if you don't rein in this tendency to color long passages (possibly in multiple colors) you can end up with a whole page of highlighted text. Ironically, that is no different from a page that is not highlighted at all, so you have wasted your time. Your mantra for highlighting text should be *less is more*. Always read your text selection first before you start highlighting anything. You need to know what the overall message is before you start placing emphasis in the text with highlighting.

Another way to annotate notes after initial notetaking is underlying significant words or passages. Albeit not quite as much fun as its colorful cousin highlighting, underlining provides precision to your emphasis.

Some people think of annotations as only using a colored highlighter to mark certain words or phrases for emphasis. Actually, annotations can refer to anything you do with a text to enhance it for your particular use (either a printed text, handwritten notes, or other sort of document you are using to learn concepts). The annotations may include highlighting passages or vocabulary, defining those unfamiliar terms once you look them up, writing questions in the margin of a book, underlining or circling key terms,

or otherwise marking a text for future reference. You can also annotate some electronic texts.

Realistically, you may end up doing all of these types of annotations at different times. We know that repetition in studying and reviewing is critical to learning, so you may come back to the same passage and annotate it separately. These various markings can be invaluable to you as a study guide and as a way to see the evolution of your learning about a topic. If you regularly begin a reading session writing down any questions you may have about the topic of that chapter or section and also write out answers to those questions at the end of the reading selection, you will have a good start to what that chapter covered when you eventually need to study for an exam. At that point, you likely will not have time to reread the entire selection especially if it is a long reading selection, but with strong annotations in conjunction with your class notes, you won't need to do that. With experience in reading discipline-specific texts and writing essays or taking exams in that field, you will know better what sort of questions to ask in your annotations.

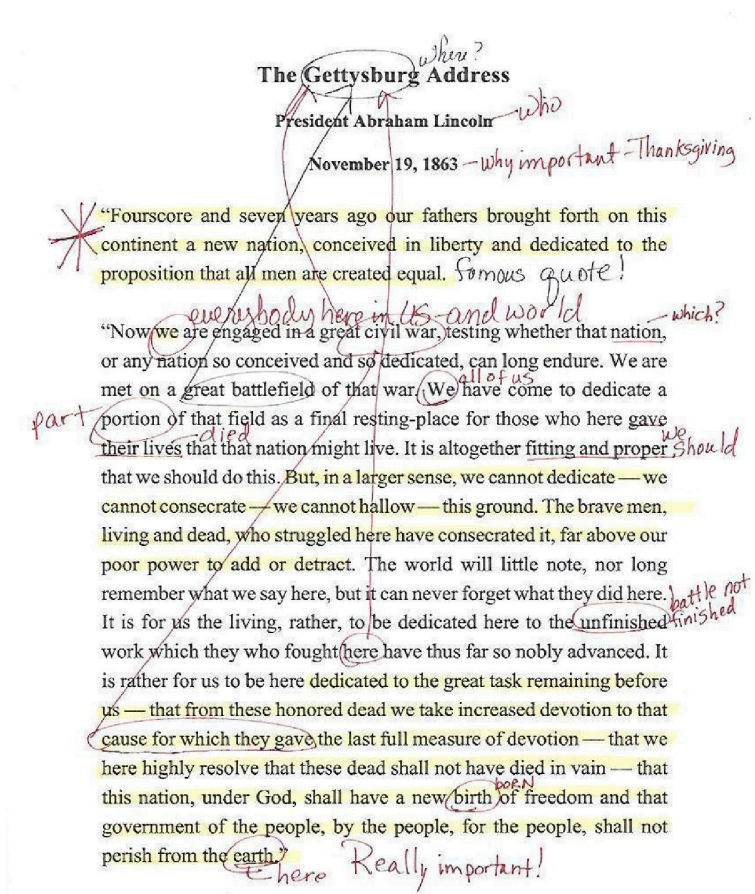


Figure 5.15 While these notes may be meaningful to the person who took them, they are neither organized nor consistent. For example, note that some of the more commonly used terms, like “we” and “unfinished,” are defined, but less common ones — “consecrate” and “hallow” — are not.

What you have to keep in the front of your mind while you are annotating, especially if you are going to conduct multiple annotation sessions, is to not overdo whatever method you use. Be judicious about what you annotate and how you do it on the page, which means you must be neat about it. Otherwise, you end up with

a mess of either color or symbols combined with some cryptic notes that probably took you quite a long time to create, but won't be worth as much to you as a study aid as they could be. This is simply a waste of time and effort.

You cannot eat up every smidgen of white space on the page writing out questions or summaries and still have a way to read the original text. If you are lucky enough to have a blank page next to the beginning of the chapter or section you are annotating, use this, but keep in mind that when you start writing notes, you aren't exactly sure how much space you'll need. Use a decipherable shorthand and write only what you need to convey the meaning in very small print. If you are annotating your own notes, you can make a habit of using only one side of the paper in class, so that if you need to add more notes later, you could use the other side. You can also add a blank page to your notes before beginning the next class date in your notebook so you'll end up with extra paper for annotations when you study.

Professional resources may come with annotations that can be helpful to you as you work through the various documentation requirements you'll encounter in college as well. Purdue University's Online Writing Lab ([OWL](#)) provides an annotated sample for how to format a college paper according to guidelines in the Modern Language Association (MLA) manual that you can see, along with other annotations.

Adding Needed Additional Explanations to Notes

Marlon was totally organized and ready to take notes in a designated course notebook at the beginning of every philosophy class session. He always dated his page and indicated what the topic of discussion was. He had various colored highlighters ready to denote the different note purposes he had defined: vocabulary in pink, confusing concepts in green, and note sections that would need additional explanations later in yellow. He also used his own

shorthand and an impressive array of symbols to indicate questions (red question mark), highly probable test material (he used a tiny bomb exploding here), additional reading suggestions, and specific topics he would ask his instructor before the next class. Doing everything so precisely, Marlon's methods seemed like a perfect example of how to take notes for success. Inevitably though, by the end of the hour-and-a-half class session, Marlon was frantically switching between writing tools, near to tears, and scouring his notes as waves of yellow teased him with uncertainty. What went wrong?

As with many of us who try diligently to do everything we know how to do for success or what we think we know because we read books and articles on success in between our course work, Marlon is suffering from trying to do too much simultaneously. It's an honest mistake we can make when we are trying to save a little time or think we can multitask and kill two birds with one stone.

Unfortunately, this particular error in judgement can add to your stress level exponentially if you don't step back and see it for what it is. Marlon attempted to take notes in class as well as annotate his notes to get them ready for his test preparation. It was too much to do at one time, but even if he could have done all those things during class, he's missing one critical point about notetaking.

As much as we may want to hurry and get it over with, notetaking in class is just the beginning. Your instructor likely gave you a pre-class assignment to read or complete before coming to that session. The intention of that preparatory lesson is for you to come in with some level of familiarity for the topic under consideration and questions of your own. Once you're in class, you may also need to participate in a group discussion, work with your classmates, or perform some other sort of lesson-directed activity that would necessarily take you away from taking notes. Does that mean you should ignore taking notes for that day? Most likely not. You may just need to indicate in your notes that you worked on a project or whatever other in-class event you experienced that date.

Very rarely in a college classroom will you engage in an activity

that is not directly related to what you are studying in that course. Even if you enjoyed every minute of the class session and it was an unusual format for that course, you still need to take some notes. Maybe your first note could be to ask yourself why you think the instructor used that unique teaching strategy for the class that day. Was it effective? Was it worth using the whole class time? How will that experience enhance what you are learning in that course?

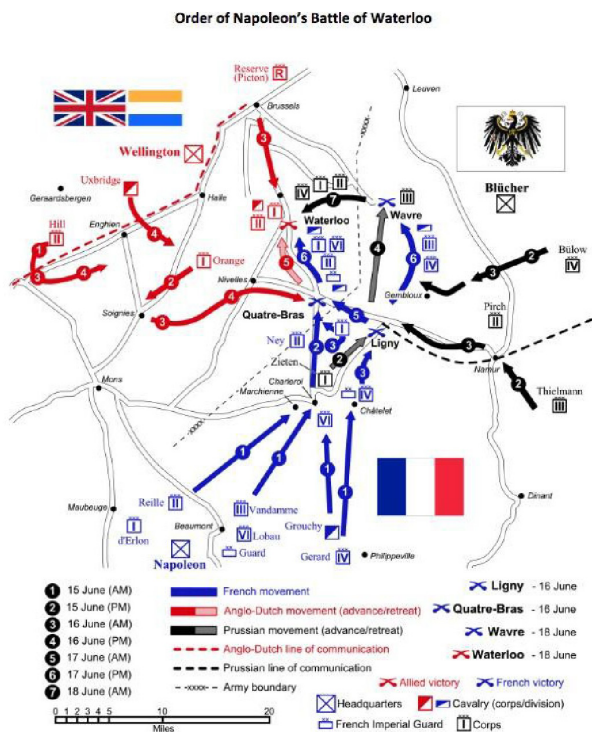
If you use an ereader or ebooks to read texts for class or read articles from the Internet on your laptop or tablet, you can still take effective notes. Depending on the features of your device, you have many choices. Almost all electronic reading platforms allow readers to highlight and underline text. Some devices allow you to add a written text in addition to marking a word or passage that you can collect at the end of your notetaking session. Look into the specific tools for your device and learn how to use the features that allow you to take notes electronically. You can also find apps on devices to help with taking notes, some of which you may automatically have installed when you buy the product. Microsoft's OneNote, Google Keep, and the Notes feature on phones are relatively easy to use, and you may already have free access to those.

Taking Notes on Non-Text Items (i.e., Tables, Maps, Figures, etc.)

You may also encounter situations as you study and read textbooks, primary sources, and other resources for your classes that are not actually texts. You can still take notes on maps, charts, graphs, images, and tables, and your approach to these non-text features is similar to when you prepare to take notes over a passage of text. For example, if you are looking at the following map, you may immediately come up with several questions. Or it may initially appear overwhelming. Start by asking yourself these questions:

What is the main point of this map?

- Who is the intended audience?
- Where is it?
- What time period does it depict?
- What does the map's legend (the explanation of symbols) include?
- What other information do I need to make sense of this map?



Source: Wikipedia Creative Commons, https://en.wikipedia.org/wiki/Order_of_battle_of_the_Waterloo_campaign

Figure 5.16 Graphics, charts, graphs, and other visual items are also important to annotate. Not only do they often convey important information, but they may appear on exams or in other situations where you'll need to use or demonstrate knowledge. Credit:

“Lpankonin” / Wikipedia Commons / Attribution 3.0 Generic (CC BY 3.0)

You may want to make an extra copy of a graphic or table before you add annotations if you are dealing with a lot of information. Making sense of all the elements will take time, and you don't want to add to the confusion.

Returning to Your Notes

Later, as soon as possible after the class, you can go back to your notes and add in missing parts. Just as you may generate questions as you're reading new material, you may leave a class session or lecture or activities with many questions. Write those down in a place where they won't get lost in all your other notes.

The exact timing of when you get back to the notes you take in class or while you are reading an assignment will vary depending on how many other classes you have or what other obligations you have in your daily schedule. A good starting place that is also easy to remember is to make every effort to review your notes within 24 hours of first taking them. Longer than that and you are likely to have forgotten some key features you need to include; must less time than that, and you may not think you need to review the information you so recently wrote down, and you may postpone the task too long.

Use your phone or computer to set reminders for all your note review sessions so that it becomes a habit and you keep on top of the schedule.

Your personal notes play a significant role in your test preparation. They should enhance how you understand the lessons, textbooks, lab sessions, and assignments. All the time and effort you put into first taking the notes and then annotating and organizing the notes will be for naught if you do not formulate an effective and

efficient way to use them before sectional exams or comprehensive tests.

The whole cycle of reading, notetaking in class, reviewing and enhancing your notes, and preparing for exams is part of a continuum you ideally will carry into your professional life. Don't try to take short cuts; recognize each step in the cycle as a building block. Learning doesn't end, which shouldn't fill you with dread; it should help you recognize that all this work you're doing in the classroom and during your own study and review sessions is ongoing and cumulative. Practicing effective strategies now will help you be a stronger professional.

ACTIVITY

What resources can you find about reading and notetaking that will actually help you with these crucial skills? How do you go about deciding what resources are valuable for improving your reading and notetaking skills?

The selection and relative value of study guides and books about notetaking vary dramatically. Ask your instructors for recommendations and see what the library has available on this topic. The following list is not comprehensive, but will give you a starting point for books and articles on notetaking in college.

- *College Rules!: How to Study, Survive, and Succeed in College*, by Sherri Nist-Olejnik and Jodi Patrick Holschuh. More than just notetaking, this book covers many aspects of transitioning into the rigors of college life and studying.
- *Effective Notetaking*, by Fiona McPherson. This small volume has suggestions for using your limited time wisely before, during, and after notetaking sessions.
- *How to Study in College*, by Walter Pauk. This is the book that introduced Pauk's notetaking suggestions we now call the

Cornell Method. It is a bit dated (from the 1940s), but still contains some valuable information.

- *Learn to Listen, Listen to Learn 2: Academic Listening and Note-taking*, by Roni S. Lebauer. The main point of this book is to help students get the most from college lectures by watching for clues to lecture organization and adapting this information into strong notes.
- *Study Skills: Do I Really Need this Stuff?*, by Steve Piscitelli. Written in a consistently down-to-earth manner, this book will help you with the foundations of strong study skills, including time management, effective notetaking, and seeing the big picture.
- “What Reading Does for the Mind,” by Anne Cunningham and Keith Stanovich, 1998, <https://www.aft.org/sites/default/files/periodicals/cunningham.pdf>
- Adler, Mortimer J. and Charles Van Doren. *How to Read a Book: The Classic Guide to Intelligent Reading*. NY: Simon & Schuster, 1940.
- Berns, Gregory S., Kristina Blaine, Michael J. Prietula, and Brandon E. Pye. *Brain Connectivity*. Dec 2013. ahead of print <http://doi.org/10.1089/brain.2013.0166>

15. Introduction to Studying and Test-Taking

Kerri didn't need to study in high school. She made good grades, and her friends considered her lucky because she never seemed to sweat exams or cram. In reality, Kerri did her studying during school hours, took excellent notes in class, asked great questions, and read the material before class meetings—all of these are excellent strategies. Kerri just seemed to do them without much fuss.

Then when she got to college, those same skills weren't always working as well. Sound familiar? She discovered that, for many classes, she needed to read paragraphs and textbook passages more than once for comprehension. Her notes from class sessions were longer and more involved—the subject material was more complicated and the problems more complex than she had ever encountered. College isn't high school, as most students realize shortly after enrolling in a higher ed program. Some old study habits and test-taking strategies may serve as a good foundation, but others may need major modification.

It makes sense that, the better you are at studying and test taking, the better results you'll see in the form of high grades and long-term learning and knowledge acquisition. And the more experience you have using your study and memorization skills and employing success strategies during exams, the better you'll get at it. But you have to keep it up—maintaining these skills and learning better strategies as the content you study becomes increasingly complex is crucial to your success. Once you transition into a work environment, you will be able to use these same skills that helped you be successful in college as you face the problem-solving demands and expectations of your job. Earning high grades is one goal, and certainly a good one when you're in college, but true learning means committing content to long-term memory.

Memory

In what situations is it best to memorize, and what do you memorize?

What can you do consistently to improve both your short- and long-term memory?

Memory is one of those cherished but mysterious elements in life. Everyone has memories, and some people are very good at rapid recall, which is an enviable skill for test takers. We know that we seem to lose the capacity to remember things as we age, and scientists continue to study how we remember some things but not others and what memory means, but we don't know that much about memory, really.

Nelson Cowan is one researcher who is working to explain what we do know about memory. His article “What Are the Differences between Long-Term, Short-Term, and Working Memory?” breaks down the different types of memory and what happens when we recall thoughts and ideas. When we remember something, we actually do quite a lot of thinking.¹

We go through three basic steps when we remember ideas or images: we encode, store, and retrieve that information. Encoding is how we first perceive information through our senses, such as when we smell a lovely flower or a putrid trash bin. Both make an impression on our minds through our sense of smell and probably our vision. Our brains encode, or label, this content in short-term memory in case we want to think about it again.

If the information is important and we have frequent exposure to it, the brain will store it for us in case we need to use it in the future in our aptly named long-term memory. Later, the brain will allow us to recall or retrieve that image, feeling, or information so we can do something with it. This is what we call remembering.

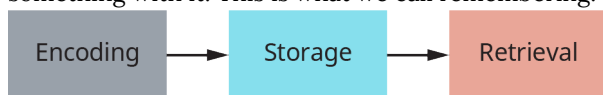


Figure 6.2

Foundations of Memory

William Sumrall et al. in the *International Journal of Humanities and Social Science* explain the foundation of memory by noting: “Memory is a term applied to numerous biological devices by which living organisms acquire, retain, and make use of skills and knowledge. It is present in all forms of higher order animals. The most evolutionary forms of memory have taken place in human beings. Despite much research and exploration, a complete understanding of human memory does not exist.”

Working Memory

Working memory is a type of short-term memory, but we use it when we are actively performing a task. For example, nursing student Marilyn needs to use her knowledge of chemical reactions to suggest appropriate prescriptions in various medical case studies. She does not have to recall every single fact she learned in years of chemistry classes, but she does need to have a working memory of certain chemicals and how they work with others. To ensure she can make these connections, Marilyn will have to review and study the relevant chemical details for the types of drug interactions she will recommend in the case studies.

In working memory, you have access to whatever information you have stored in your memory that helps you complete the task you are performing. For instance, when you begin to study an assignment, you certainly need to read the directions, but you must also remember that in class your professor reduced the number of problem sets the written instructions indicated you needed to finish. This was an oral addition to the written assignment. The change to the instructions is what you bring up in working memory when you complete the assignment.

Short-Term Memory

Short-term memory is a very handy thing. It helps us remember where we set our keys or where we left off on a project the day before. Think about all the aids we employ to help us with short-

term memory: you may hang your keys in a particular place each evening so you know exactly where they are supposed to be. When you go grocery shopping, do you ever choose a product because you recall an advertising jingle? You see the box of cereal and you remember the song on the TV commercial. If that memory causes you to buy that product, the advertising worked. We help our memory along all the time, which is perfectly fine. In fact, we can modify these everyday examples of memory assistance for purposes of studying and test taking. The key is deliberate use of strategies that are not so elaborate that they are too difficult to remember in our short-term memory.

Long-Term Memory

Long-term memory is exactly what it sounds like. These are things you recall from the past, such as the smell of your elementary school cafeteria or how to pop a wheelie on a bicycle. Our brain keeps a vast array of information, images, and sensory experiences in long-term memory. Whatever it is we are trying to keep in our memories, whether a beautiful song or a list of chemistry vocabulary terms, must first come into our brains in short-term memory. If we want these fleeting ideas to transfer into long-term memory, we have to do some work, such as causing frequent exposure to the information over time (such as studying the terms every day for a period of time or the repetition you performed to memorize multiplication tables or spelling rules) and some relevant manipulation for the information.

According to Alison Preston of the University of Texas at Austin's Center for Learning and Memory, "A short-term memory's conversion to a long-term memory requires changes within the brain . . . and result[s] in changes to neurons (nerve cells) or sets of neurons. . . . For example, new synapses—the connections between neurons through which they exchange information—can form to allow for communication between new networks of neurons. Alternatively, existing synapses can be strengthened to allow for increased sensitivity in the communication between two neurons."[4](#)

When you work to convert your thoughts into memories, you

are literally changing your mind. Much of this brain work begins in the part of the brain called the hippocampus. Preston continues, “Initially, the hippocampus works in concert with sensory-processing regions distributed in the neocortex (the outermost layer of the brain) to form the new memories. Within the neocortex, representations of the elements that constitute an event in our life are distributed across multiple brain regions according to their content. . . . When a memory is first formed, the hippocampus rapidly combines this distributed information into a single memory, thus acting as an index of representations in the sensory-processing regions. As time passes, cellular and molecular changes allow for the strengthening of direct connections among the neocortical regions, enabling access to the memory independent of the hippocampus.”

We learn the lyrics of a favorite song by singing and/or playing the song over and over. That alone may not be enough to get that song into the coveted long-term memory area of our brain, but if we have an emotional connection to the song, such as a painful breakup or a life-changing proposal that occurred while we were listening to the song, this may help. Think of ways to make your study session memorable and create connections with the information you need to study. That way, you have a better chance of keeping your study material in your memory so you can access it whenever you need it.

Studying

Studying is hard work, but you can still learn some techniques to help you be a more effective learner. Two major and interrelated techniques involve avoiding distractions to the best of your ability and creating a study environment that works to help you concentrate.

Debunking Study Myths

MYTH #1: You can multitask while studying.

How many times do you eat in the car? Watch TV while you write out a grocery list? Listen to music while you cook dinner? What about type an e-mail while you're on the phone with someone else and jot down notes about the call? The common term for this attempt to do more than one thing at a time is multitasking, and almost everyone does it at some point. On some days, you simply cannot accomplish all that you want to get done, so you double up. The problem is, multitasking doesn't really work. Of course, it exists, and we do it. For instance, we walk and chew gum or drive and talk, but we are not really thinking about two or more distinct things or doing multiple processes simultaneously.

MYTH #2: Highlighting the main points of a text is useful.

Another myth of studying that seems to have a firm hold is that the idea of highlighting text—in and of itself—is the best way to review study material. It is one way, and you can get some benefit from it, but don't trick yourself into spending too much time on this surface activity and consider your study session complete. Annotating texts or notes is a first-step type of study practice. If you allow it to take up all your time, you may want to think you are fully prepared for an exam because you put in the time. Actually, you need much more time reviewing and retrieving your lessons and ideas from the text or class lecture as well as quizzing yourself to accomplish your goal of learning so you can perform well on the exam. Highlighting is a task you can do rather easily, and it makes you feel good because you are actively engaging with your text, but true learning needs more steps.

MYTH #3: Studying effectively is effortless.

There is nothing effortless, or even pleasant at times, about studying. This is why so many students don't put in the time necessary to learn complex material: it takes time, effort, and, in some cases, a little drudgery. This is not to say that the outcome,

learning—and maybe making an A—is not pleasant and rewarding. It is just that when done right, learning takes focus, deliberate strategies, and time. Think about a superstar athlete who puts in countless hours of drills and conditioning so that she makes her work on the field look easy. If you can also enjoy the studying, the skill development, and the knowledge building, then you will most likely be more motivated to do the work.

Three Effective Study Strategies

There are more than three study strategies, but focusing on the most effective strategies will make an enormous difference in how well you will be able to demonstrate learning (also known as “acing your tests”). Here is a brief overview of each of the three strategies:

- Spacing—This has to do with when you study. Hint: Don’t cram; study over a period of days, preferably with “breaks” in between.
- Interleaving—This has to do with what you study. Hint: Don’t study just one type of content, topic, chapter, or unit at a time; instead, mix up the content when you study.
- Practice testing—This has to do with how you study. Hint: Don’t just reread content. You must quiz or test your ability to retrieve the information from your brain.

Spacing

We all know that cramming is not an effective study strategy, but do we know why? Research on memory suggests that giving yourself time in between study sessions actually helps you forget the information. And forgetting, which sounds like it would be something you don’t want to do, is actually good for your ability to remember information long-term. That’s because every time you forget something, you need to relearn it, leading to gains in your

overall understanding and “storage” of the material. The table below demonstrates how spacing works. Assume you are going to spend about four hours studying for a Sociology exam. Cramming would have you spending most of those four hours the night before the exam. With spacing, on the other hand, you would study a little bit each day.

Spacing

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Cramming				Study for 1 hour	Study for 3 hours	Sociology Test	
Spacing	Study for 1 hour		Study for 30 minutes	Study for 1 hour	Study for 90 minutes	Sociology Test	

Table 6.1

Interleaving

One particular studying technique is called interleaving, which calls for students to mix up the content that is being studied. This means not just spending the entire study session on one sort of problem and then moving on to a different sort of problem at a later time.

If you take the schedule we used for the spacing example above, we can add the interleaving concepts to it. Notice that interleaving includes revisiting material from a previous chapter or unit or revisiting different types of problems or question sets. The benefit is that your brain is “mixing up” the information, which can sometimes lead to short-term forgetting but can lead to long-term memory and learning.

Interleaving

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Reread Sociology, Chapter 1.		Reread Sociology, Chapter 1 and 2	Reread Sociology, Chapters 1-3.	Reread notes.	
Reorganize notes		Take Ch 1 online quiz.	Take online quizzes for chapters 2 and 3.	Review items missed on online quizzes.	TEST in sociology, Chapters 1-3
		Create Chapter 2 concept map	Reorganize notes. Create practice test	Take practice test and review challenge areas.	

Table 6.2

Practice Testing

You can do a practice “test” in two ways. One is to test yourself as you are reading or taking in information. This is a great way to add a little variety to your studying. You can ask yourself what a paragraph or text section means as you read. To do this, read a passage in a text, cover up the material, and ask yourself, “What was the main idea of this section?” Recite aloud or write down your answer, and then check it against the original information.

Another, more involved, way to practice test is to create flashcards or an actual test by writing a test. This takes more time, but there are online programs such as Quizlet that make it a little easier. Practice testing is an effective study strategy because it helps you practice retrieving information, which is what you want to be able to do when you are taking the real test.

One of the best ways to learn something is to teach it to someone else, so ask a friend or family member if you can explain something to them and teach them the lesson. You may find you know more about the subject than you thought . . . or you may realize quickly that you need to do more studying. Why does teaching someone else rank as one of the most effective ways to learn something? It is a form of practice testing that requires you to demonstrate you know something in front of someone else! No one wants to look like

they don't know what they are talking about, even if it your audience is another classmate.

Leveraging Emerging Technologies When Studying and Preparing for Assessment

The section above mentions tools such as [Quizlet](#) to help with studying. As of late 2024, students who log into Quizlet will see a number of AI-augmented options, such as uploading class notes, slides, and other material to help generate study guides, flashcards, and practice tests. Large Language Models (LLMs) have made automating the test preparation process rather straightforward. Services like Quizlet will do this partly for free but may also be fee-based.

Study tools such as flashcards, guides, and practice exams can also be generated by any chatbot such as ChatGPT or Microsoft Co-Pilot. These platforms allow you to paste in your notes or upload them as documents (.docx files, pdf files, etc) followed by prompts such as: “You’re a tutor who specializes in teaching biology. Use the notes to create flashcards that I can use to help prepare for an upcoming exam on DNA.” Or you can adapt one of Ethan Mollick’s several “student exercises” prompts from [More Useful Things](#), such as the Universal Tutoring Prompt, to help become more familiar with a challenging concept. These tools are not perfect, since these forms of AI come with certain flaws (discussed in other chapters on AI), but since these models have been trained heavily on the concepts students are learning in their course and they can receive notes the students have taken as context, they are quickly becoming part of the student studying workflow.

Making use of these tools follows the same principles discussed elsewhere in this section, however. If the student hasn’t already encoded and digested the information by taking notes, asking a chatbot to help prepare the night before an exam will likely not

be a substitute. Thoroughly understanding and absorbing new and difficult concepts takes time.

On the other hand, interacting with chatbots, and learning what kinds of prompting techniques work best for your own studying workflow, can become a useful supplement for many and even help certain students better absorb information. If it's 6 hours before an exam and you're still struggling to understand how RNA replication works, chatbots can explain this process in ways that connect with your prior knowledge and interests—and then quiz you on whether you understand the information.

This chapter is from *College Success*, “[Memory](#)” and “[Studying](#).” CC-BY 4.0. The final section was added by the authors of this textbook.

16. Note-taking

The second key stage of learning is tracking, digesting, and storing the information. This isn't just for those who attend in-person modalities (face-to-face, hybrid, etc.). This applies to any classroom environment. Passively consuming information without jotting things down or annotating the text (or video, or audio) means you're surfing the information rather than understanding it. And, even worse, it will be difficult to access that information later.

Taking notes is about two things: 1) encoding the information, so you can understand and recall it better later, and 2) organizing what you're learning in ways that it can be more easily retrieved. The latter is becoming even more important as technology offers new ways to do things with the information we have at hand. If you've stored and organized your learning in predictable places, you will be able to compound the knowledge later.

Taking Notes

Beyond providing a record of the information you are reading or hearing, notes help you organize ideas and help you make meaning out of something about which you may not be familiar, so note-taking and reading are two compatible skill sets. Taking notes also helps you stay focused on the question at hand. Strong notes build on your prior knowledge of a subject, help you discuss trends or patterns present in the information, and direct you toward areas needing further research or reading.

It is not a good habit to transcribe every single word a speaker utters—even if you have an amazing ability to do that. Most of us don't have that court-reporter-esque skill level anyway, and if we try, we would end up missing valuable information. Learn to listen for main ideas and distinguish between these main ideas and details

that typically support the ideas. Include examples that explain the main ideas, but do so using understandable abbreviations.

Think of all notes as potential study guides. In fact, if you only take notes without actively working on them after the initial notetaking session, the likelihood of the notes helping you is slim. Research on this topic concludes that without active engagement after taking notes, most students forget 60–75 percent of the material over which they took the notes—within two days! That sort of defeats the purpose, don't you think? This information about memory loss was first brought to light by 19th-century German psychologist Hermann Ebbinghaus. Fortunately, you do have the power to thwart what is sometimes called the Ebbinghaus Forgetting Curve by reinforcing what you learned through review at intervals shortly after you take in the material and frequently thereafter.

If you are a musician, you'll understand this phenomenon well. When you first attempt a difficult piece of music, you may not remember the chords and notes well at all, but after frequent practice and review, you generate a certain muscle memory and cognitive recall that allows you to play the music more easily.

Notetaking may not be the most glamorous aspect of your higher-education journey, but it is a study practice you will carry throughout college and into your professional life. Setting yourself up for successful notetaking is almost as important as the actual taking of notes, and what you do after your notetaking session is equally significant. Well-written notes help you organize your thoughts, enhance your memory, and participate in class discussion, and they prepare you to respond successfully on exams. With all that riding on your notes, it would behoove you to learn how to take notes properly and continue to improve your note-taking skills.

Preparing to Take Notes

Preparing to take notes means more than just getting out your laptop or making sure you bring pen and paper to class. You'll do a much better job with your notes if you understand why we take notes, have a strong grasp on your preferred notetaking system, determine your specific priorities depending on your situation, and engage in some version of efficient shorthand.

Like handwriting and fingerprints, we all have unique and fiercely independent notetaking habits. These understandably and reasonably vary from one situation to the next, but you can only improve your skills by learning more about ways to take effective notes and trying different methods to find a good fit.

The very best notes are the ones you take in an organized manner that encourages frequent review and use as you progress through a topic or course of study. For this reason, you need to develop a way to organize all your notes for each class so they remain together and organized. As old-fashioned as it sounds, a clunky three-ring binder can be an excellent organizational container for class notes. You can easily add to previous notes, insert handouts you may receive in class, and maintain a running collection of materials for each separate course. If the idea of carrying around a heavy binder has you rolling your eyes, then transfer that same structure into your computer files. If you don't organize your many documents into some semblance of order on your computer, you will waste significant time searching for improperly named or saved files.

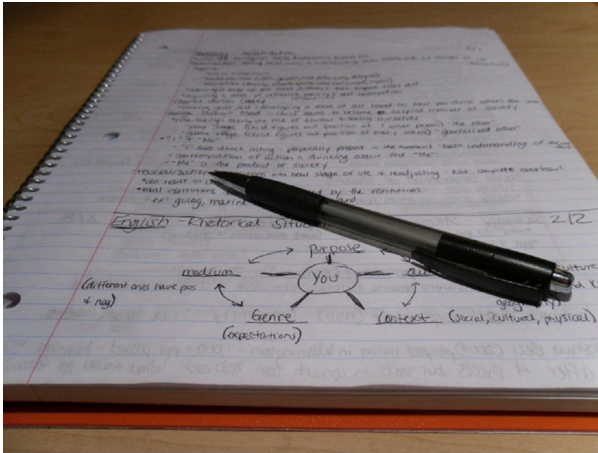


Figure. The best notes are the ones you take in an organized manner. Frequent review and further annotation are important to build a deep and useful understanding of the material. (Credit: English106 / Flickr / Attribution 2.0 Generic (CC-BY 2.0))

Managing Notetaking Systems

Whichever of the many notetaking systems you choose (and new ones seem to come out almost daily), the very best one is the one that you will use consistently. The skill and art of notetaking is not automatic for anyone; it takes a great deal of practice, patience, and continuous attention to detail. Add to that the fact that you may need to master multiple notetaking techniques for different classes, and you have some work to do. Unless you are specifically directed by your instructor, you are free to combine the best parts of different systems if you are most comfortable with that hybrid system.

Just to keep yourself organized, all your notes should start off with an identifier, including at the very least the date, the course name, the topic of the lecture/presentation, and any other

information you think will help you when you return to use the notes for further study, test preparation, or assignment completion. Additional, optional information may be the number of notetaking sessions about this topic or reminders to cross-reference class handouts, textbook pages, or other course materials. It's also always a good idea to leave some blank space in your notes so you can insert additions and questions you may have as you review the material later.

Notetaking Strategies

You may have a standard way you take all your notes for all your classes. When you were in high school, this one-size-fits-all approach may have worked. Now that you're in college, reading and studying more advanced topics, your general method may still work some of the time, but you should have some different strategies in place if you find that your method isn't working as well with college content. You probably will need to adopt different notetaking strategies for different subjects. The strategies in this section represent various ways to take notes in such a way that you are able to study after the initial notetaking session.

Cornell Method

One of the most recognizable notetaking systems is called the Cornell Method, a relatively simple way to take effective notes devised by Cornell University education professor Dr. Walter Pauk in the 1940s. In this system, you take a standard piece of note paper and divide it into three sections by drawing a horizontal line across your paper about one to two inches from the bottom of the page (the summary area) and then drawing a vertical line to separate the rest of the page above this bottom area, making the left side about two inches (the recall column) and leaving the biggest area to the right of your vertical line (the notes column). You may want to make one page and then copy as many pages as you think you'll need for

any particular class, but one advantage of this system is that you can generate the sections quickly. Because you have divided up your page, you may end up using more paper than you would if you were writing on the entire page, but the point is not to keep your notes to as few pages as possible. The Cornell Method provides you with a well-organized set of notes that will help you study and review your notes as you move through the course. If you are taking notes on your computer, you can still use the Cornell Method in Word or Excel on your own or by using a template someone else created.

Topic/Objective:		Name:	
		Class/Period:	
		Date:	
Essential Question:			
Questions:		Notes:	
Summary:			

Figure. The Cornell Method provides a straightforward, organized, and flexible approach

Now that you have the notetaking format generated, the beauty of the Cornell Method is its organized simplicity. Just write on one side of the page (the right-hand notes column)—this will help later when you are reviewing and revising your notes. During your notetaking session, use the notes column to record information over the main

points and concepts of the lecture; try to put the ideas into your own words, which will help you not transcribe the speaker's words verbatim. Skip lines between each idea in this column. Practice the shortcut abbreviations covered in the next section and avoid writing in complete sentences. Don't make your notes too cryptic, but you can use bullet points or phrases equally well to convey meaning—we do it all the time in conversation. If you know you will need to expand the notes you are taking in class but don't have time, you can put reminders directly in the notes by adding and underlining the word *expand* by the ideas you need to develop more fully.

As soon as possible after your notetaking session, preferably within eight hours but no more than twenty-four hours, read over your notes column and fill in any details you missed in class, including the places where you indicated you wanted to expand your notes. Then in the recall column, write any key ideas from the corresponding notes column—you can't stuff this smaller recall column as if you're explaining or defining key ideas. Just add the one- or two-word main ideas; these words in the recall column serve as cues to help you remember the detailed information you recorded in the notes column.

Once you are satisfied with your notes and recall columns, summarize this page of notes in two or three sentences using the summary area at the bottom of the sheet. This is an excellent time to get with another classmate or a group of students who all heard the same lecture to make sure you all understood the key points. Now, before you move onto something else, cover the large notes column, and quiz yourself over the key ideas you recorded in the recall column. Repeat this step often as you go along, not just immediately before an exam, and you will help your memory make the connections between your notes, your textbook reading, your in-class work, and assignments that you need to succeed on any quizzes and exams.

Outlining

Basic outlining is by far the most common method. Other note-organizing systems may help you in different disciplines. You can

take notes in a formal outline if you prefer, using Roman numerals for each new topic, moving down a line to capital letters indented a few spaces to the right for concepts related to the previous topic, then adding details to support the concepts indented a few more spaces over and denoted by an Arabic numeral. You can continue to add to a formal outline by following these rules.

You don't absolutely have to use the formal numerals and letters, but you have to then be careful to indent so you can tell when you move from a higher-level topic to the related concepts and then to the supporting information. The main benefit of an outline is how organized it is. You have to be on your toes when you are taking notes in class to ensure you keep up the organizational format of the outline, which can be tricky if the lecture or presentation is moving quickly or covering many diverse topics.

The following formal outline example shows the basic pattern:

- Dogs (main topic—usually general)
 - German Shepherd (concept related to main topic)
 - Protection (supporting info about the concept)
 - Assertive
 - Loyal
 - Weimaraner (concept related to main topic)
 - Family-friendly (supporting info about the concept)
 - Active
 - Healthy
- Cats (main topic)
 - Siamese

You would just continue on with this sort of numbering and indenting format to show the connections between main ideas, concepts, and supporting details. Whatever details you do not capture in your notetaking session, you can add after the lecture as you review your outline.

Returning to Your Notes

Later, as soon as possible after the class, you can go back to your notes and add in missing parts. Just as you may generate questions as you're reading new material, you may leave a class session or lecture or activities with many questions. Write those down in a place where they won't get lost in all your other notes.

The exact timing of when you get back to the notes you take in class or while you are reading an assignment will vary depending on how many other classes you have or what other obligations you have in your daily schedule. A good starting place that is also easy to remember is to make every effort to review your notes within 24 hours of first taking them. Longer than that and you are likely to have forgotten some key features you need to include; must less time than that, and you may not think you need to review the information you so recently wrote down, and you may postpone the task too long.

Use your phone or computer to set reminders for all your note review sessions so that it becomes a habit and you keep on top of the schedule.

Your personal notes play a significant role in your test preparation. They should enhance how you understand the lessons, textbooks, lab sessions, and assignments. All the time and effort you put into first taking the notes and then annotating and organizing the notes will be for naught if you do not formulate an effective and efficient way to use them before sectional exams or comprehensive tests.

The whole cycle of reading, notetaking in class, reviewing and enhancing your notes, and preparing for exams is part of a continuum you ideally will carry into your professional life. Don't try to take short cuts; recognize each step in the cycle as a building block. Learning doesn't end, which shouldn't fill you with dread; it should help you recognize that all this work you're doing in the classroom and during your own study and review sessions is

ongoing and cumulative. Practicing effective strategies now will help you be a stronger professional.

Notes and Resources

- College Rules!: How to Study, Survive, and Succeed in College, by Sherri Nist-Olejniak and Jodi Patrick Holschuh. More than just notetaking, this book covers many aspects of transitioning into the rigors of college life and studying.
- Effective Notetaking, by Fiona McPherson. This small volume has suggestions for using your limited time wisely before, during, and after notetaking sessions.
- How to Study in College, by Walter Pauk. This is the book that introduced Pauk's notetaking suggestions we now call the Cornell Method. It is a bit dated (from the 1940s), but still contains some valuable information.
- Learn to Listen, Listen to Learn 2: Academic Listening and Note-taking, by Roni S. Lebauer. The main point of this book is to help students get the most from college lectures by watching for clues to lecture organization and adapting this information into strong notes.
- Study Skills: Do I Really Need this Stuff?, by Steve Piscitelli. Written in a consistently down-to-earth manner, this book will help you with the foundations of strong study skills, including time management, effective notetaking, and seeing the big picture.

- “What Reading Does for the Mind,” by Anne Cunningham and Keith Stanovich, 1998, <https://www.aft.org/sites/default/files/periodicals/cunningham.pdf>
- Adler, Mortimer J. and Charles Van Doren. How to Read a Book: The Classic Guide to Intelligent Reading. NY: Simon & Schuster, 1940.
- Berns, Gregory S., Kristina Blaine, Michael J. Prietula, and Brandon E. Pye. Brain Connectivity. Dec 2013. ahead of print <http://doi.org/10.1089/brain.2013.0166>

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17. CWI Tutoring Services and Writing Center

At the College of Western Idaho (CWI), students have access to various academic support services through the Tutoring Services and Writing Center. These resources are designed to foster academic growth, provide personalized assistance, and help students achieve success across a wide range of subjects and skill levels. Below explores the services offered, how they operate, and why utilizing these resources is crucial for students' success.

Writing Center

The [Writing Center](#) at CWI offers specialized support for students working on writing assignments, whether it's for an essay, research paper, or creative writing project. The focus is not on grammar or mechanics but mainly on higher-order concerns like developing clear arguments, organizing ideas effectively, and ensuring overall clarity.

Students can meet with a writing tutor in person or online. They can also receive written feedback, specific to a student's needs, through sending their draft through the Writing Center's email service, ACES. The Writing Center helps students at any stage of the writing process, whether they need to brainstorm ideas, revise drafts, or polish final papers.

Tutoring Services

Tutoring at CWI offers both in-person and online options to

accommodate students' needs. Tutors provide assistance with a wide variety of content courses, as well as writing, academic skills mentoring, and English language acquisition. The [Tutoring Services website](#) serves as a central point for accessing these resources where students can book sessions, view tutoring schedules, and find study materials.

Embedded Tutoring

CWI also utilizes Embedded Tutoring, a system in which tutors are assigned to specific courses. This proactive approach integrates tutors directly into the classroom setting. Embedded tutors attend class sessions, work closely with the instructor, and provide immediate support for students. This model ensures that help is readily available and tailored to the specific content of the course.

Upswing Tutors

In addition to in-person tutoring, [Upswing Tutors](#) provide 24/7 online tutoring services. This platform allows students to connect with professional tutors in a wide range of subjects at any time, making it particularly beneficial for those who have non-traditional schedules or need help outside of typical business hours. Upswing tutors are well-versed in various academic disciplines and offer real-time assistance, making it easy for students to clarify questions and get feedback when they need it most.

Study Skills Workshops

Beyond one-on-one tutoring, CWI offers [Study Skills Workshops](#) to help students develop important academic strategies. These workshops cover topics such as time management, note-taking techniques, and test preparation. These sessions are designed to empower students with practical skills that they can apply across all their classes. By improving their study habits, students become more independent learners and gain the tools to succeed throughout their academic careers.

Workshops are typically offered throughout the semester and are open to all CWI students. They are especially beneficial for new students adjusting to the demands of college or for returning students looking to enhance their learning strategies.

How to use the Writing Center and Tutoring Services: Student Examples

Two scenarios provide real-life examples of how students can effectively utilize the tutoring services available at CWI:

Scenario 1: Philosophy 103 – Ethics

Maya, a dedicated philosophy student, is navigating the complex world of ethical theories, such as Kant's Categorical Imperative. As she dives deeper into the readings, she begins to feel overwhelmed by some of the arguments (and jargon!) posed by the philosophers. By

mid-semester, she recognizes the need for academic support and actively seeks help from CWI's Tutoring Services.

- Week 6: With an essay on Kantian ethics looming, Maya books a one-on-one session with a tutor to help clarify her understanding of Kant's Categorical Imperative.
- Week 7: Maya attends a Study Skills Workshop, where she learns valuable note-taking techniques that help her better absorb dense philosophical texts.
- Week 8: Realizing she needs further assistance with structuring her essay, Maya meets with a Writing Center tutor to refine her argument and ensure her ideas are logically presented.
- End of Semester: Maya revisits the Tutoring Services before her final exams to ensure she is confident and well-prepared to tackle a wide range of ethical theories covered throughout the course.

This structured support through tutoring and workshops not only helps Maya improve her understanding of Kant's ethical theory but also develops her overall academic skills.

Scenario 2: BIOL 226 – Human Anatomy & Physiology

Carlos, a health science student, is passionate about his future career but faces challenges in his Anatomy & Physiology course, especially in memorizing complex information.

- Beginning of Semester: Carlos, eager to excel, recognizes the need to start strong and seeks out tutoring early to ensure he doesn't fall behind.
- Week 2: Carlos attends a Study Skills Workshop focused on memory retention, which is essential for mastering the detailed content required in his course.
- Week 4: Overwhelmed by lab assignments and theoretical material, Carlos seeks help from the Tutoring Center to develop effective time management strategies.
- Midterm Week: Struggling with certain chapters, Carlos books a session with an Upswing Tutor to review the cardiovascular system in detail.
- Week 10: As he works on a major assignment comparing bodily systems, Carlos joins a group study session with CWI tutors, benefiting from the collaborative learning environment.
- End of Semester: To prepare for practical

exams, Carlos opts for repeated tutoring sessions focusing on both the theoretical and hands-on aspects of human anatomy.

These two scenarios illustrate the diverse ways in which students can leverage tutoring services to overcome academic challenges and excel in their coursework. Whether it's refining an argument in an essay or mastering complex scientific concepts, CWI's Tutoring Services provide the necessary support for academic success.

How to Get Started

Getting started with CWI's Tutoring Services or Writing Center is easy. For tutoring, visit the [Tutoring Services website](#) to explore available subjects and book an appointment. For writing support, head to the [Writing Center's webpage](#) where you can schedule a session with a writing consultant. Both services offer in-person and online options to fit students' needs and schedules.

Be sure to check out the video tutorials on each platform to learn how to make the most of these services, from scheduling appointments to submitting work for feedback.

PART V

MEMORY, STUDYING, AND TEST TAKING

18. Studying, Memory, and Test Taking: Introduction



Figure 6.1 How we study is as important as what we study. The environment is a critical element of success.

Student Survey

How confident are you in preparing for and taking tests? Take this quick survey to figure it out, ranking questions on a scale of 1–4, 1 meaning “least like me” and 4 meaning “most like me.” These questions will help you determine how the chapter concepts relate to you right now. As you are introduced to new concepts and practices, it can be informative to reflect on how your understanding changes over time. We’ll revisit these questions at the end of the chapter to see whether your feelings have changed.

1. I set aside enough time to prepare for tests.
2. If I don’t set aside enough time, or if life gets in the way, I can usually cram and get positive results.
3. I prefer to pull all-nighters. The adrenaline and urgency help me remember what I need come test time.

4. I study my notes, highlight book passages, and use flash cards, but I still don't feel like I'm as successful as I should be on tests.

You can also take the [Chapter 6 Survey](#) anonymously online.

STUDENT PROFILE

"I didn't have to study much for tests in high school, but I learned really quick that you have to for college. One of the best strategies is to test yourself over the material. This will help you improve your retrieval strength and help you remember more when it comes to the test. I also learned about reviewing your graded tests. This will help you see where you went wrong and why. Being able to see your mistakes and correct them helps the storage and retrieval strength as well as building those dendrites. Getting a question wrong will only improve those things helping you remember the next time it comes up."

—**Lilli Branstetter**, University of Central Arkansas

About this Chapter

By the time you finish this chapter, you should be able to do the following:

- Outline the importance of memory when studying, and note some opportunities to strengthen memory.
- Discuss specific ways to increase the effectiveness of studying.
- Articulate test-taking strategies that minimize anxiety and maximize results.

Kerri didn't need to study in high school. She made good grades,

and her friends considered her lucky because she never seemed to sweat exams or cram. In reality, Kerri did her studying during school hours, took excellent notes in class, asked great questions, and read the material before class meetings—all of these are excellent strategies. Kerri just seemed to do them without much fuss.

Then when she got to college, those same skills weren't always working as well. Sound familiar? She discovered that, for many classes, she needed to read paragraphs and textbook passages more than once for comprehension. Her notes from class sessions were longer and more involved—the subject material was more complicated and the problems more complex than she had ever encountered. College isn't high school, as most students realize shortly after enrolling in a higher ed program. Some old study habits and test-taking strategies may serve as a good foundation, but others may need major modification.

It makes sense that, the better you are at studying and test taking, the better results you'll see in the form of high grades and long-term learning and knowledge acquisition. And the more experience you have using your study and memorization skills and employing success strategies during exams, the better you'll get at it. But you have to keep it up—maintaining these skills and learning better strategies as the content you study becomes increasingly complex is crucial to your success. Once you transition into a work environment, you will be able to use these same skills that helped you be successful in college as you face the problem-solving demands and expectations of your job. Earning high grades is one goal, and certainly a good one when you're in college, but true learning means committing content to long-term memory.

19. Memory

Questions to consider:

- How does working memory work, exactly?
- What's the difference between working and short-term memory?
- How does long-term memory function?
- What obstacles exist to remembering?
- When and how should you memorize things?

In what situations is it best to memorize, and what do you memorize?

What can you do consistently to improve both your short- and long-term memory?

Memory is one of those cherished but mysterious elements in life. Everyone has memories, and some people are very good at rapid recall, which is an enviable skill for test takers. We know that we seem to lose the capacity to remember things as we age, and scientists continue to study how we remember some things but not others and what memory means, but we don't know that much about memory, really.

Nelson Cowan is one researcher who is working to explain what we do know about memory. His article "What Are the Differences between Long-Term, Short-Term, and Working Memory?" breaks down the different types of memory and what happens when we recall thoughts and ideas. When we remember something, we actually do quite a lot of thinking.¹

We go through three basic steps when we remember ideas or images: we encode, store, and retrieve that information. Encoding is how we first perceive information through our senses, such as when we smell a lovely flower or a putrid trash bin. Both make an impression on our minds through our sense of smell and probably

our vision. Our brains encode, or label, this content in short-term memory in case we want to think about it again.

If the information is important and we have frequent exposure to it, the brain will store it for us in case we need to use it in the future in our aptly named long-term memory. Later, the brain will allow us to recall or retrieve that image, feeling, or information so we can do something with it. This is what we call remembering.

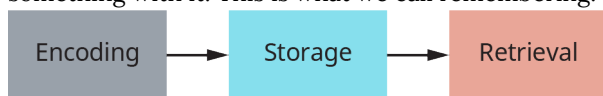


Figure 6.2

ANALYSIS QUESTION

Take a few minutes to list ways you create memories on a daily basis. Do you think about how you make memories? Do you do anything that helps you keep track of your memories?

Foundations of Memory

William Sumrall et al. in the *International Journal of Humanities and Social Science* explain the foundation of memory by noting: “Memory is a term applied to numerous biological devices by which living organisms acquire, retain, and make use of skills and knowledge. It is present in all forms of higher order animals. The most evolutionary forms of memory have taken place in human beings. Despite much research and exploration, a complete understanding of human memory does not exist.”²

Working Memory

Working memory is a type of short-term memory, but we use it when we are actively performing a task. For example, nursing student Marilyn needs to use her knowledge of chemical reactions to suggest appropriate prescriptions in various medical case studies. She does not have to recall every single fact she learned in years of chemistry classes, but she does need to have a working memory of certain chemicals and how they work with others. To ensure she can make these connections, Marilyn will have to review and study the relevant chemical details for the types of drug interactions she will recommend in the case studies.

In working memory, you have access to whatever information you have stored in your memory that helps you complete the task you are performing. For instance, when you begin to study an assignment, you certainly need to read the directions, but you must also remember that in class your professor reduced the number of problem sets the written instructions indicated you needed to finish. This was an oral addition to the written assignment. The change to the instructions is what you bring up in working memory when you complete the assignment.

Short-Term Memory

Short-term memory is a very handy thing. It helps us remember where we set our keys or where we left off on a project the day before. Think about all the aids we employ to help us with short-term memory: you may hang your keys in a particular place each evening so you know exactly where they are supposed to be. When you go grocery shopping, do you ever choose a product because you recall an advertising jingle? You see the box of cereal and you remember the song on the TV commercial. If that memory causes

you to buy that product, the advertising worked. We help our memory along all the time, which is perfectly fine. In fact, we can modify these everyday examples of memory assistance for purposes of studying and test taking. The key is deliberate use of strategies that are not so elaborate that they are too difficult to remember in our short-term memory.

ACTIVITY

Consider this list of items. Look at the list for no more than 30 seconds. Then, cover up the list and use the spaces below to complete an activity.

Baseball	Picture frame	Tissue	Paper clip
Bread	Pair of dice	Fingernail polish	Spoon
Marble	Leaf	Doll	Scissors
Cup	Jar of sand	Deck of cards	Ring
Blanket	Ice	Marker	String

Without looking at the list, write down as many items as you can remember.

Now, look back at your list and make sure that you give yourself credit for any that you got right. Any items that you misremembered, meaning they were not in the original list, you won't count in your total. TOTAL ITEMS REMEMBERED _____.

There were 20 total items. Did you remember between 5 and 9 items? If you did, then you have a typical short-term memory and you just participated in an experiment, of sorts, to prove it.

Harvard psychology professor George A. Miller in 1956 claimed

humans can recall about five to nine bits of information in our short-term memory at any given time. Other research has come after this claim, but this concept is a popular one. Miller's article is entitled "The Magical Number Seven, Plus or Minus Two" and is easily accessible online if you're interested in learning more about this seminar report.³

Considering the vast amount of knowledge available to us, five to nine bits isn't very much to work with. To combat this limitation, we clump information together, making connections to help us stretch our capacity to remember. Many factors play into how much we can remember and how we do it, including the subject matter, how familiar we are with the ideas, and how interested we are in the topic, but we certainly cannot remember absolutely everything, for a test or any other task we face. As such, we have to use effective strategies, like those we cover later in this chapter, to get the most out of our memories.

ACTIVITY

Now, let's revisit the items above. Go back to them and see if you can organize them in a way that you would have about five groups of items. See below for an example of how to group them.

Row 1: Items found in a kitchen

Row 2: Items that a child would play with

Row 3: Items of nature

Row 4: Items in a desk drawer/school supplies

Row 5: Items found in a bedroom

Cup	Spoon	Ice	Bread	
Baseball	Marble	Pair of dice	Doll	Deck of cards
Jar of sand	Leaf			
Marker	String	Scissors	Paper clip	
Ring	Picture frame	Fingernail polish	Tissue	Blanket

Now that you have grouped items into categories, also known as chunking, you can work on remembering the categories and the items that fit into those categories, which will result in remembering more items. Check it out below by covering up the list of items again and writing down what you can remember.

Now, look back at your list and make sure that you give yourself credit for any that you got right. Any items that you misremembered, meaning they were not in the original list, you won't count in your total. TOTAL ITEMS REMEMBERED _____. Did you increase how many items you could remember?

Long-Term Memory

Long-term memory is exactly what it sounds like. These are things you recall from the past, such as the smell of your elementary school cafeteria or how to pop a wheelie on a bicycle. Our brain keeps a vast array of information, images, and sensory experiences in long-term memory. Whatever it is we are trying to keep in our memories, whether a beautiful song or a list of chemistry vocabulary terms, must first come into our brains in short-term memory. If we want these fleeting ideas to transfer into long-term memory, we have to do some work, such as causing frequent exposure to the information over time (such as studying the terms every day for a period of time or the repetition you performed to memorize

multiplication tables or spelling rules) and some relevant manipulation for the information.

According to Alison Preston of the University of Texas at Austin's Center for Learning and Memory, "A short-term memory's conversion to a long-term memory requires changes within the brain . . . and result[s] in changes to neurons (nerve cells) or sets of neurons. . . . For example, new synapses—the connections between neurons through which they exchange information—can form to allow for communication between new networks of neurons. Alternatively, existing synapses can be strengthened to allow for increased sensitivity in the communication between two neurons."⁴

When you work to convert your thoughts into memories, you are literally *changing your mind*. Much of this brain work begins in the part of the brain called the *hippocampus*. Preston continues, "Initially, the hippocampus works in concert with sensory-processing regions distributed in the neocortex (the outermost layer of the brain) to form the new memories. Within the neocortex, representations of the elements that constitute an event in our life are distributed across multiple brain regions according to their content. . . . When a memory is first formed, the hippocampus rapidly combines this distributed information into a single memory, thus acting as an index of representations in the sensory-processing regions. As time passes, cellular and molecular changes allow for the strengthening of direct connections among the neocortical regions, enabling access to the memory independent of the hippocampus."

We learn the lyrics of a favorite song by singing and/or playing the song over and over. That alone may not be enough to get that song into the coveted long-term memory area of our brain, but if we have an emotional connection to the song, such as a painful breakup or a life-changing proposal that occurred while we were listening to the song, this may help. Think of ways to make your study session memorable and create connections with the information you need to study. That way, you have a better chance of keeping your study material in your memory so you can access it whenever you need it.

ANALYSIS QUESTION

What are some ways you convert short-term memories into long-term memories?

Do your memorization strategies differ for specific courses (e.g., how you remember for math or history)?

Obstacles to Remembering

If remembering things we need to know for exams or for learning new disciplines were easy, no one would have problems with it, but students face several significant obstacles to remembering, including a persistent lack of sleep and an unrealistic reliance on cramming. Life is busy and stressful for all students, so you have to keep practicing strategies to help you study and remember successfully, but you also must be mindful of obstacles to remembering.

Lack of Sleep

Let's face it, sleep and college don't always go well together. You have so much to do! All that reading, all those papers, all those extra hours in the science lab or tutoring center or library! And then we have the social and emotional aspects of going to school, which may not be the most critical aspect of your life as you pursue more education but are a significant part of who you are. When you consider everything you need to attend to in college, you probably won't be surprised that sleep is often the first thing we give up as we search for more time to accomplish everything we're trying to do. That seems reasonable—just wake up an hour earlier or stay up

a little later. But you may want to reconsider picking away at your precious sleep time.

Sleep benefits all of your bodily functions, and your brain needs sleep time to dream and rest through the night. You probably can recall times when you had to do something without adequate sleep. We say things like “I just can’t wake up” and “I’m walking around half asleep.”

In fact, you may actually be doing just that. Lack of sleep impairs judgment, focus, and our overall mood. Do you know anyone who is always grumpy in the morning? A fascinating medical study from the University of California Los Angeles (UCLA) claims that sleep deprivation is as dangerous as being drunk, both in what it does to our bodies and in the harm we may cause to ourselves and others in driving and performing various daily tasks.⁵⁶

If you can’t focus well because you didn’t get enough sleep, then you likely won’t be able to remember whatever it is you need to recall for any sort of studying or test-taking situation. Most exams in a college setting go beyond simple memorization, but you still have a lot to remember for exams. For example, when Saanvi sits down to take an exam on introductory biology, she needs to recall all the subject-specific vocabulary she read in the textbook’s opening chapters, the general connections she made between biological studies and other scientific fields, and any biology details introduced in the unit for which she is taking the exam.

Trying to make these mental connections on too little sleep will take a large mental toll because Saanvi has to concentrate even harder than she would with adequate sleep. She isn’t merely tired; her brain is not refreshed and primed to conduct difficult tasks. Although not an exact comparison, think about when you overtax a computer by opening too many programs simultaneously. Sometimes the programs are sluggish or slow to respond, making it difficult to work efficiently; sometimes the computer shuts down completely and you have to reboot the entire system. Your body is a bit like that on too little sleep.

On the flip side, though, your brain on adequate sleep is amazing,

and sleep can actually assist you in making connections, remembering difficult concepts, and studying for exams. The exact reasons for this is still a serious research project for scientists, but the results all point to a solid connection between sleep and cognitive performance.

If you're interested in learning more about this research, the American Academy of Sleep Medicine (AASM) is a good place to start. One article is entitled "College Students: Getting Enough Sleep Is Vital to Academic Success."

ANALYSIS QUESTION

How long do you sleep every night on average? Do you see a change in your ability to function when you haven't had enough sleep? What could you do to limit the number of nights with too little sleep?

Downside of Cramming

At least once in their college careers, most students will experience the well-known pastime called *cramming*. See if any of this is familiar: Shelley has lots of classes, works part-time at a popular restaurant, and is just amazingly busy, so she puts off serious study sessions day after day. She isn't worried because she has set aside time she would have spent sleeping to cram just before the exam. That's the idea anyway. Originally, she planned to stay up a little late and study for four hours from 10 p.m. to 2 a.m. and still get several hours of refreshing sleep. But it's Dolphin Week or Beat State Day or whatever else comes up, and her study session doesn't start until midnight—she'll pull an *all-nighter* (to be more precise, this is actually an *all-really-early-morning-er*, but it doesn't quite have the same ring to it). So, two hours after her original start time, she tries to *cram* all the lessons, problems, and information from the last two

weeks of lessons into this one session. Shelley falls asleep around 3 a.m. with her notes and books still on her bed. After her late night, she doesn't sleep well and goes into the morning exam tired.

Shelley does OK but not great on the exam, and she is not pleased with her results. More and more research is showing that the stress Shelley has put on her body doing this, combined with the way our brains work, makes cramming a seriously poor choice for learning.

One sleep researcher, Dr. Susan Redline from Boston, says, "Sleep deficiency can affect mood and the ability to make memories and learn, but it also affects metabolism, appetite, blood pressure, levels of inflammation in the body and perhaps even the immune response."⁷

Your brain simply refuses to cooperate with cramming—it sounds like a good idea, but it doesn't work. Cramming causes stress, which can lead to paralyzing test anxiety; it erroneously supposes you can remember and understand something fully after only minimal exposure; and it overloads your brain, which, however amazing it is, can only focus on one concept at a time and a limited number of concepts all together for learning and retention.

Leading neuroscientist John Medina claims that the brain begins to wander at about 10 minutes, at which point you need a new stimulus to spark interest.⁸ That doesn't mean you can't focus for longer than 10 minutes; you just have to switch gears a lot to keep your brain engaged. Have you ever heard a speaker drone on about one concept for, say, 30 minutes without somehow changing pace to engage the listeners? It doesn't take much to re-engage—pausing to ask the listeners questions or moving to a different location in the room will do it—but without these subtle attention markers, listeners start thinking of something else. The same thing happens to you if you try to cram all reading, problem-solving, and note reviewing into one long session; your brain will wander.

WHAT STUDENTS SAY

1. Which of the following is your most common method of studying?
 - a. Reading or rereading the text or my class notes.
 - b. Watching videos of my instructor's lecture or other people discussing the topics.
 - c. Taking practice quizzes/tests.
 - d. Creating/using study tools (flashcards, mnemonic devices, etc.)
 - e. Working with a study group, tutor, or academic support.
2. Which of the following do you have the most difficulty remembering?
 - a. Vocabulary and facts (such as Biology vocab, Historical facts.)
 - b. Problem-solving methods (such as in Math)
 - c. Details from text and literature
 - d. Skills and processes (such as a lab technique or a building process)
 - e. Computer functions/locations/processes
 - f. Which formulas, processes, or categories to apply in situations (such as in Physics or Accounting)
3. How much anxiety do you feel when an exam or other major course evaluation is approaching?
 - a. A great deal
 - b. A lot
 - c. A moderate amount
 - d. A little
 - e. None at all

You can also take the anonymous What [Students Say](#) surveys to add your voice to this textbook. Your responses will be included in updates.

Students offered their views on these questions, and the results are displayed in the graphs below.

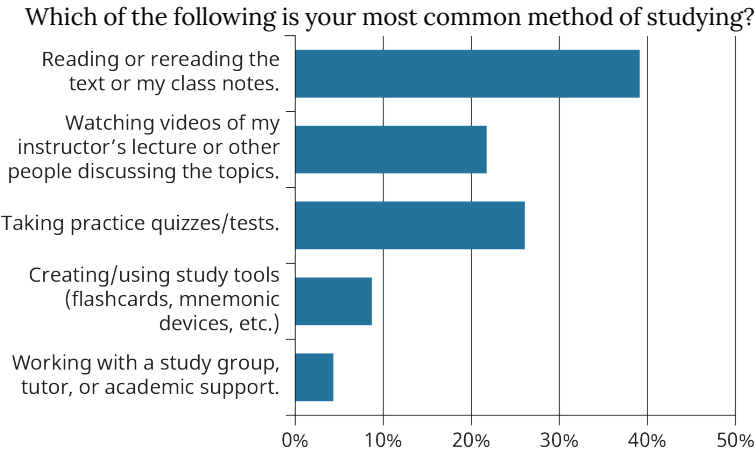


Figure 6.3

Which of the following do you have the most difficulty remembering?

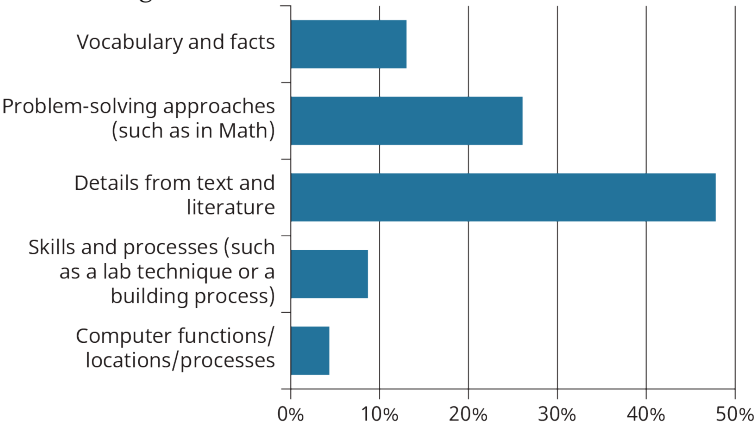


Figure 6.4

How much anxiety do you feel when an exam or other major course evaluation is approaching?

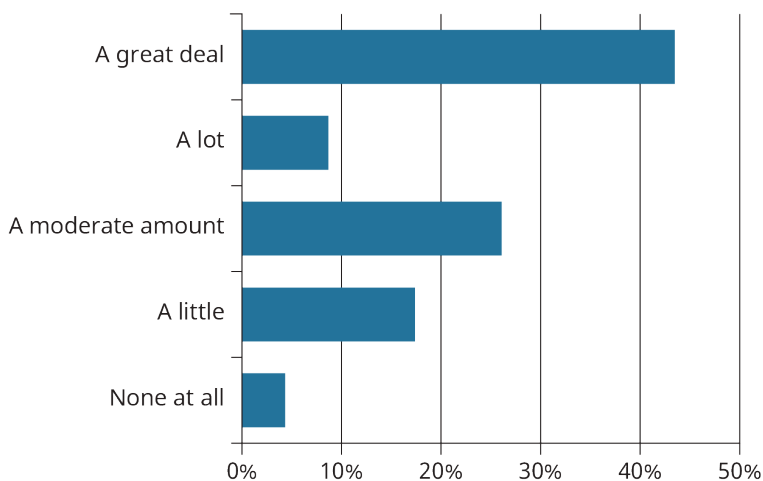


Figure 6.5

Determining When/What to Memorize

In the realm of learning and studying, some conditions warrant memorization as the most effective way to work with information. For instance, if you are expected to have a working knowledge of conversational French or Spanish, you will have to memorize some words. Simply knowing a long list of terms isn't going to help you order food in a café or ask for directions in a foreign country because you also need to understand the other language's grammar and have some sort of context for what needs to be said from your vocabulary list. But you cannot say the words in a different language if you cannot remember your vocabulary. From this scenario, you can assume that memorization is a good fit for some parts of language acquisition.

A worthwhile book on memory, thinking, and learning is a short study called *Make It Stick: The Science of Successful Learning* by Peter Brown, Henry Roediger, and Mark McDaniel. The authors conclude, after extensive research, that our attempts to speed up

learning and make studying easier are not good ideas. Studying is hard work, and it should be. For learning to *stick*, we need to work hard to pull the information out of our memory and use it by continually pushing ourselves to accomplish increasingly difficult tasks.⁹

Footnotes

- ¹NCBI. “What are the differences between long-term, short-term, and working memory?” <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2657600/>
- ²Sumrall, William, et. al. “A Review of Memory Theory.” *International Journal of Humanities and Social Science*, 2016. Vol. 6. No. 5.
- ³Miller, George A. “The Magical Number Seven, Plus or Minus Two: Some Limits on Our capacity for Processing Information.” *Psychological Review*, 1956.
- ⁴Preston, Alison. “Ask the Experts: How do short-term memories become long-term memories?” *Scientific American*, Dec. 2017. <https://www.scientificamerican.com/article/how-do-short-term-memories-become-l/>
- ⁵Nir, Yuval, et. al. “Selective neuronal lapses precede human cognitive lapses following sleep deprivation,” *Nature Medicine* volume23, pages 1474–1480 (2017).
- ⁶UCLA Health. “Drowsy Driving.” <https://www.uclahealth.org/sleepcenter/drowsy-driving>
- ⁷Redline, Susan <https://abcnews.go.com/Health/Sleep/health-hazards-linked-lack-sleep/story?id=16524313>
- ⁸Medina, John. *Brain Rules*. 2018, Pear Press.
- ⁹Brown, Peter, et. al. *Make It Stick: The Science of Successful Learning*. Brown, Roediger, Daniel, 2014.

20. Studying

Questions to consider:

- How do you prepare yourself and your environment for successful studying?
- What study strategies will be most beneficial to you?
- What are learning preferences and strategies, and how can you leverage those to your advantage?

Preparing to Study

Studying is hard work, but you can still learn some techniques to help you be a more effective learner. Two major and interrelated techniques involve avoiding distractions to the best of your ability and creating a study environment that works to help you concentrate.

Avoiding Distractions

We have always had distractions—video games, television shows, movies, music, friends—even housecleaning can distract us from doing something else we need to do, like study for an exam. That may seem extreme, but sometimes vacuuming is the preferred activity to buckling down and working through calculus problems! Cell phones, tablets, and portable computers that literally bring a world of possibilities to us anywhere have brought *distraction* to an entirely new level. When was the last time you were with a large group of people when you didn't see at least a few people on devices?



Figure 6.6 Video games are a common distraction, but we need to be aware that even tedious activities like cleaning can be a distraction from studying.

When you study, your biggest challenge may be to block out all the competing noise. And letting go of that connection to our friends and the larger world, even for a short amount of time, can be difficult. Perhaps the least stressful way to allow yourself a distraction-free environment is to make the study session a definite amount of time: long enough to get a significant amount of studying accomplished but short enough to hold your attention.

You can increase that attention time with practice and focus. Pretend it is a professional appointment or meeting during which you cannot check e-mail or texts or otherwise engage with your portable devices. We have all become very attached to the ability to check in—anonymously on social media or with family and friends via text, chat, and calls. If you set a specific amount of time to study without interruptions, you can convince your wandering mind that you will soon be able to return to your link to the outside world. Start small and set an alarm—a 30-minute period to review notes, then a brief break, then another 45-minute study session to quiz yourself on the material, and so on.

When you prepare for your optimal study session, remember to do these things:

- Put your phone out of sight—in another room or at least some place where you will not see or hear it vibrate or ring. Just flipping it over is not enough.
- Turn off the television or music (more on that in the next section).
- Unless you are deliberately working with a study group, study somewhere alone if possible or at least away from others enough to not hear them talking.

If you live with lots of other people or don't have access to much privacy, see if you can negotiate some space alone to study. Ask others to leave one part of the house or an area in one room as a quiet zone during certain hours. Ask politely for a specific block of time; most people will respect your educational goals and be willing to accommodate you. If you're trying to work out quiet zones with small children in the house, the bathtub with a pillow can make a fine study oasis.

Study Environment

You may not always be in the mood or inspired to study. And if you have a long deadline, maybe you can blow off a study session on occasion, but you shouldn't get into the habit of ignoring a strong study routine. Jane Austen once wrote in a letter, "I am not at all in a humor for writing; I must write on till I am." Sometimes just starting is the hard part; go ahead and begin. Don't wait around for your study muse; start working, and she'll show up.

Sometimes you just need to plop down and study whenever and wherever you can manage—in the car waiting for someone, on the bus, at the Little League field as you cheer on your shortstop. And that's OK if this is the exception. For long-term success in studying,

though, you need a better study setting that will help you get the most out of your limited study time. Whatever your space limitations, carve out a place that you can dedicate to reading, writing, note taking, and reviewing. This doesn't need to be elaborate and expensive—all you truly need is a flat surface large enough to hold either your computer or writing paper, book or notes, pens/pencils/markers, and subject-specific materials you may need (e.g., stand-alone calculators, drawing tools, and notepads). Your space should be cool or warm enough for you to be comfortable as you study. What do you have now that you consider your study space? Is it set up for your optimal success?



Figure 6.7 Which is before, and which is after? (Credit: Ali West / Flickr / Attribution 2.0 Generic (CC-BY 2.0))

If it is at all possible, try to make this area exclusive to your study sessions and something you can leave set up all the time and a place out of the way of family or roommate traffic. For example, Martina thought setting up her study station on the dining room table was a good idea at first. The view was calming, and the table was big enough to spread out and could even hold all her materials to study architectural drawings, her favorite subject. But then she needed the table for a small family dinner party, so she had to find a cubbyhole to hide away her supplies with some needing to go into a closet in the next room. Now she was spread out over multiple study spaces. And the family TV was in an adjacent room, not visible from the table but certainly an auditory distraction. Martina ultimately decided to forgo her view and create a smaller station in an unused bedroom so she could leave her supplies out and have a quieter area.

You may have to try out numerous places to determine what works best for you.

Wherever you study, try to make it a welcoming place you want to be in—not an uncomfortable environment that makes you want to just do the minimum you must complete and leave. You should include the basics: a good chair, a work surface, and whatever materials, books, notes, and other supplies you need for the subject you are studying. If you want to make it even more of a productive place, you can look in magazines for ideas or search the web to see how others have set up simple areas or more elaborate arrangements. Don't let decorating your workspace be an excuse to get out of studying!

You don't need an elaborate setting, but you may want to consider including a few effective additions if you have the space:

- small bulletin board for often-used formulas
- encouraging quotes or pictures of your goal
- whiteboard for brainstorming
- sticky notes for reminders in texts and notes
- file holder for most-used documents
- bookshelf for reference books

ACTIVITY

Describe every element in your ideal study environment and explain why it's there as well as how it will make more efficient use of your time, limit distractions, or in some other way strengthen your ability to study.

After you have described your ideal study environment, think about how you can adapt that environment if you cannot be in your favorite place to study. How do you *make your own space* in the library, a student lounge, or a dedicated space on campus for student studying?

Debunking Study Myths

MYTH #1: You can multitask while studying.

How many times do you eat in the car? Watch TV while you write out a grocery list? Listen to music while you cook dinner? What about type an e-mail while you're on the phone with someone else and jot down notes about the call? The common term for this attempt to do more than one thing at a time is multitasking, and almost everyone does it at some point. On some days, you simply cannot accomplish all that you want to get done, so you double up. The problem is, multitasking doesn't really work. Of course, it exists, and we do it. For instance, we walk and chew gum or drive and talk, but we are not really thinking about two or more distinct things or doing multiple processes simultaneously.

MYTH #2: Highlighting main points of a text is useful.

Another myth of studying that seems to have a firm hold is that the idea of highlighting text—in and of itself—is the best way to review study material. It is one way, and you can get some benefit from it, but don't trick yourself into spending too much time on this surface activity and consider your study session complete. Annotating texts or notes is a first-step type of study practice. If you allow it to take up all your time, you may want to think you are fully prepared for an exam because you put in the time. Actually, you need much more time reviewing and retrieving your lessons and ideas from the text or class lecture as well as quizzing yourself to accomplish your goal of learning so you can perform well on the exam. Highlighting is a task you can do rather easily, and it makes you feel good because you are actively engaging with your text, but true learning needs more steps.

MYTH #3: Studying effectively is effortless.

There is nothing effortless, or even pleasant at times, about studying. This is why so many students don't put in the time necessary to learn complex material: it takes time, effort, and, in some cases, a little drudgery. This is not to say that the outcome, learning—and maybe making an A—is not pleasant and rewarding.

It is just that when done right, learning takes focus, deliberate strategies, and time. Think about a superstar athlete who puts in countless hours of drills and conditioning so that she makes her work on the field look easy. If you can also *enjoy* the studying, the skill development, and the knowledge building, then you will most likely be more motivated to do the work.

ANALYSIS QUESTION

When are you most liable to multitask? How could you be more aware of this practice and try to eliminate it, especially when it comes to studying? How can you make your initial text highlighting more time efficient so you can include other study practices?

Study Strategies

Everyone wishes they had a better memory or a stronger way to use memorization. You can make the most of the memory you have by making some conscious decisions about how you study and prepare for exams. Incorporate these ideas into your study sessions:

Practicing effective memorization is when you use a trick, technique, or strategy to recall something—for another class, an exam, or even to bring up an acquaintance's name in a social situation. Really whatever works for you to recall information is a good tool to have. You can create your own quizzes and tests to go over material from class. You can use mnemonics to jog your memory. You can work in groups to develop unique ways to remember complex information. Whatever methods you choose to enhance your memory, keep in mind that repetition is one of the most effective tools in any memory strategy. Do whatever you do over and over for the best results.

Using Mnemonics

Mnemonics (pronounced new-monics) are a way to remember things using reminders. Did you learn the points of the compass by remembering NEWS (north, east, west, and south)? Or the notes on the music staff as FACE or EGBDF (every good boy does fine)? These are mnemonics. When you're first learning something and you aren't familiar with the foundational concepts, these help you bring up the information quickly, especially for multistep processes or lists. After you've worked in that discipline for a while, you likely don't need the mnemonics, but you probably won't forget them either.

Here are some familiar mnemonics you may find useful:



Figure 6.8

You can certainly make up your own mnemonics, but be careful that your reminder isn't so complex and convoluted that it is more difficult to remember than the information you were relating it to!

ANALYSIS QUESTION

Do you have other mnemonics that help you remember difficult material? What are they? How have they helped you with remembering important things?

Practicing Concept Association

When you study, you're going to make connections to other things—that's a good thing. It shows a highly intelligent ability to make sense of the world when you can associate like and even somewhat unlike components. If, for instance, you were reading Martin Luther King Jr.'s "Letter from a Birmingham Jail," and you read the line that he had been in Birmingham, you may remember a trip you took with your family last summer through Alabama and that you passed by and visited the civil rights museum in Birmingham. This may remind you of the different displays you saw and the discussions you had with your family about what had happened concerning civil rights in the 1950s, '60s, and '70s in the United States.

This is a good connection to make, but if your assignment is to critique the literary aspects of King's long epistle, you need to be able to come back to the actual words of the letter and see what trends you can see in his writing and why he may have used his actual words to convey the powerful message. The connection is fine, but you can't get lost in going down rabbit holes that may or may not be what you're supposed to be doing at the time. Make a folder for this assignment where you can put things such as a short summary of your trip to Alabama. You may eventually include notes from this summary in your analysis. You may include something from a website that shows you information about that time period. Additionally, you could include items about Martin Luther King Jr.'s life and death and his work for civil rights. All of these elements may

help you understand the significance of this one letter, but you need to be cognizant of what you're doing at the time and remember it is not usually a good idea to just try to keep it all in your head. The best idea is to have a way to access this information easily, either electronically or in hard copy, so that if you are able to use it, you can find it easily and quickly.

Generating Idea Clusters

Like mnemonics, idea clusters are nothing more than ways to help your brain come up with ways to recall specific information by connecting it to other knowledge you already have. For example, Andrea is an avid knitter and remembers how to create complicated stitches by associating them with nursery rhymes she read as a child. A delicate stitch that requires concentration because it makes the yarn look like part of it is hiding brings to mind Red Riding Hood, and connecting it to that character helps Andrea recall the exact order of steps necessary to execute the design. You can do the same thing with song lyrics, lines from movies, or favorite stories where you draw a connection to the well-known phrase or song and the task you need to complete.

APPLICATION

Choose one of the following, and create an idea cluster to group and organize:

- Example A: aviation jobs in North America
- Example B: the use of analytics in sports to determine team rosters
- Example C: how social media affects political campaigns

Start the idea cluster with the topic circled in the middle of the page. For Example A, you might make one cluster off the main circle for specific positions; you could add another cluster for salary ranges and another for geographic regions.

Three Effective Study Strategies

There are more than three study strategies, but focusing on the most effective strategies will make an enormous difference in how well you will be able to demonstrate learning (also known as “acing your tests”). Here is a brief overview of each of the three strategies:

- Spacing—This has to do with *when* you study. Hint: Don’t cram; study over a period of days, preferably with “breaks” in between.
- Interleaving—This has to do with *what* you study. Hint: Don’t study just one type of content, topic, chapter, or unit at a time; instead, mix up the content when you study.
- Practice testing—This has to do with *how* you study. Hint: Don’t just reread content. You must quiz or test your ability to retrieve the information from your brain.

Spacing

We all know that cramming is not an effective study strategy, but do we know why? Research on memory suggests that giving yourself time in between study sessions actually helps you forget the information. And forgetting, which sounds like it would be something you *don’t* want to do, is actually good for your ability to remember information long-term. That’s because every time you forget something, you need to relearn it, leading to gains in your overall understanding and “storage” of the material. The table below demonstrates how spacing works. Assume you are going to spend

about four hours studying for a Sociology exam. Cramming would have you spending most of those four hours the night before the exam. With spacing, on the other hand, you would study a little bit each day.

Spacing

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Cramming				Study for 1 hour	Study for 3 hours	Sociology Test	
Spacing	Study for 1 hour		Study for 30 minutes	Study for 1 hour	Study for 90 minutes	Sociology Test	

Table 6.1

Interleaving

One particular studying technique is called interleaving, which calls for students to mix up the content that is being studied. This means not just spending the entire study session on one sort of problem and then moving on to a different sort of problem at a later time.

If you take the schedule we used for the spacing example above, we can add the interleaving concepts to it. Notice that interleaving includes revisiting material from a previous chapter or unit or revisiting different types of problems or question sets. The benefit is that your brain is “mixing up” the information, which can sometimes lead to short-term forgetting but can lead to long-term memory and learning.

Interleaving

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Reread Sociology, Chapter 1. Reorganize notes		Reread Sociology, Chapter 1 and 2 Take Ch 1 online quiz. Create Chapter 2 concept map	Reread Sociology, Chapters 1-3. Take online quizzes for chapters 2 and 3. Reorganize notes. Create practice test	Reread notes. Review items missed on online quizzes. Take practice test and review challenge areas.	TEST in sociology, Chapters 1-3

Table 6.2

Practice Testing

You can do a practice “test” in two ways. One is to test yourself as you are reading or taking in information. This is a great way to add a little variety to your studying. You can ask yourself what a paragraph or text section means as you read. To do this, read a passage in a text, cover up the material, and ask yourself, “What was the main idea of this section?” Recite aloud or write down your answer, and then check it against the original information.

Another, more involved, way to practice test is to create flashcards or an actual test by writing a test. This takes more time, but there are online programs such as Quizlet that make it a little easier. Practice testing is an effective study strategy because it helps you practice *retrieving* information, which is what you want to be able to do when you are taking the real test.

One of the best ways to learn something is to teach it to someone else, so ask a friend or family member if you can explain something to them, and *teach* them the lesson. You may find you know more about the subject than you thought . . . or you may realize quickly that you need to do more studying. Why does teaching someone

else rank as one of the most effective ways to learn something? It is a form of practice testing that requires you to demonstrate you know something in front of someone else! No one wants to look like they don't know what they are talking about, even if it your audience is another classmate.

Recognizing Strengths/Weaknesses of Preferred Study Approaches

Most children don't learn to ride a bicycle by reading a manual; they learn by watching other kids, listening to instructions, and getting up on the seat and learning to balance—sometimes with training wheels or a proud parent holding on, but ultimately without any other support. They may fall over and feel insecure, but usually, they learn to make the machine go. Most of us employ multiple methods of study all the time. You usually only run into trouble if you stubbornly rely on just one way to learn or study and the material you're studying or the task you want to accomplish doesn't lend itself to that preference. You can practice specific strategies to help you learn in your preferred learning approach. Can you think of a time when the way you usually study a situation didn't work?

When deciding on a study approach, consider what you know about the material and the type of knowledge it involves. Is it a group of concepts related to problem-solving methods, such as those you'd find in a physics class? Or is it a literary analysis of a novel? Consider as many elements as possible about the material — and the way the material will be assessed — to help choose a study approach.

You should also consider your instructor's preferred method of teaching and learning. Watching the way they teach lessons or convey necessary course information to the class. Do they almost always augment lessons with video clips to provide examples or create a memorable narrative? Do they like to show you how something works by demonstrating and working with their

hands—for instance, assembling a piece of equipment by taking it apart and putting it back together again? Echoing their teaching approach may help your study. That doesn't mean you have to change your entire learning approach to match your instructors' methods. Many instructors understand that their students will have different ways of learning and try to present information in multiple ways.

Practicing Active Continuous Improvement for All Preferences

You can certainly learn through specific approaches or according to specific preferences, but you will also need to adapt to different situations, skills, and subject areas. Don't limit yourself to thinking you can *only* learn one way or another. That mindset induces anxiety when you encounter a learning situation that doesn't match your preference. What if your instructor *only* uses a spoken lecture to teach concepts in your chemistry class, and you consider yourself a visual learner? Or what if the only method presented to you for learning mathematical computations is to see videos of others working problems, and you're more hands-on? You may have to concentrate in a different way or devise other strategies to learn, but you can do it. In fact, you should sometimes work on the styles/preferences that you feel are your least favorite; it will actually strengthen your overall ability to learn and retain information.¹⁰

Dr. Stephen Covey, famous leadership coach and businessman, called this attention to knowing and honing all your skill sets, not just your favorites, *sharpening the saw*. He advised that people should be aware of their strengths but should always hone their weaknesses by saying, “We must never become too busy sawing to take time to sharpen the saw.”¹¹ For instance, in the chemistry lecture example, you may need to take good notes from the spoken lecture and then review those notes as you sketch out any complex ideas or formulas. If the math videos are not enough for you to grasp difficult problems, you may ask for or find your own problems for

additional practice covering that particular mathematical concept to solve on your own.

Footnotes

- [10](#)Newton, Phillip M., & Miah, Mahallad. “Evidence-Based Higher Education—Is the Learning Style ‘Myth’ Important?” *Frontiers in Psychology* 8:444 (2017) DOI: 10. 3389/FPSYG. 2017.00444.
- [11](#)Covey, Stephen. The 7 Habits of Highly Effective People ® <https://www.franklincovey.com/the-7-habits.html>

2I. Test Taking

Questions to consider:

- What are the differences between test prep and taking the actual test?
- How can you take a *whole person* approach to test taking?
- What can you do on test day to increase your confidence and success?
- What should you know about test anxiety?

Once you are practicing good study habits, you'll be better prepared for actual test taking. Since studying and test taking are both part of learning, honing your skills in one will help you in the other.

Probably the most obvious differences between your preparation for an exam and the actual test itself is your level of urgency and the time constraints. A slight elevation in your stress level can actually be OK for testing—it keeps you focused and *on your game* when you need to bring up all the information, thinking, and studying to show what you've learned. Properly executed, test preparation mixed in with a bit of stress can significantly improve your actual test-taking experience.

Preparation vs. Actual Test

You can replicate the effective sense of urgency an actual test produces by including timed writing into your study sessions. You don't need all of your study time to exactly replicate the test, but you would be well served to find out the format of the exam in advance and practice the skills you'll need to use for the various test components. On one early exam in history, Stuart learned the prof was going to include several short-answer essay questions—one for

each year of the time period covered. Stuart set up practice times to write for about 15 to 20 minutes on significant events from his notes because he estimated that would be about how much time he could devote out of the hour-long testing session to write one or two required short-answer questions. He would write a prompt from his notes, set a timer, and start writing. If you're ready and you have practiced and know the material, 20 minutes is adequate to prepare, draft, and revise a short response, but you don't have a lot of extra time.

Likewise, in a math exam, you will need to know what kinds of problems you will have to solve and to what extent you'll need to show your computational work on the exam. If you are able to incorporate this sort of timed problem-solving into your study time, you'll be more prepared and confident when you actually come to the exam. Making yourself adhere to a timed session during your study can only help. It puts a sense of urgency on you, and it will help you to find out what types of problems you need to practice more than ones that perhaps you're more comfortable solving.

Leveraging Study Habits for Test Prep

In your mind, you probably know what you need to do to be prepared for tests. Occasionally, something may surprise you—emphasis on a concept you considered unimportant or a different presentation of a familiar problem. But those should be exceptions. You can take all your well-honed study habits to get ready for exams. Here's a checklist for study and test success for your consideration:



Figure 6.9

Read this list with each separate class in mind, and check off the items you already do. Give yourself one point for every item you checked. If you always take the success steps—congratulations! They are not a guarantee, but doing the steps mindfully will give you a nice head start. If you do fewer than five of the steps—you have some work to do. But recognition is a good place to start, and you can incorporate these steps starting now.

As strange as this may sound, you can find some interesting research articles online about using the taste or smell of peppermint to increase memory, recall, and focus. Read more at: <http://naturalsociety.com/mint-scent-improve-brain-cognition->

memory. While sucking on a peppermint disk won't replace studying, why not experiment with this relatively easy idea that seems to be gaining some scientific traction?

Whole Person Approach to Testing

Just because you are facing a major exam in your engineering class (or math or science or English class) doesn't mean everything else in your life comes to a stop. Perhaps that's somewhat annoying, but that's reality. Allergies still flare up, children still need to eat, and you still need to sleep. You must see your academic life as one segment of who you are—it's an important segment, but just one aspect of who you are as a whole person. Neela tries to turn off everything else when she has exams coming up in her nursing program, which is pretty often. She ignores her health, puts off her family, tries to reschedule competing work tasks, and focuses all her energy on the pending exam. On the surface, that sounds like a reasonable approach, but if she becomes really sick by ignoring a minor head cold, or if she misses an important school deadline for one of her children, Neela risks making matters worse by attempting to compartmentalize so strictly. Taking care of her own health by eating and sleeping properly; asking for help in other aspects of her busy life, such as attending to the needs of her children; and seeing the big picture of how it all fits together would be a better approach. Pretending otherwise may work sporadically, but it is not sustainable for the long run.

A whole person approach to testing takes a lot of organization, scheduling, and attention to detail, but the life-long benefits make the effort worthwhile.

Establishing Realistic Expectations for Test Situations

Would you expect to make a perfect pastry if you've never learned how to bake? Or paint a masterpiece if you've never tried to work with paints and brushes? Probably not. But often we expect ourselves to perform at much higher levels of achievement than that for which we've actually prepared. If you become very upset and stressed if you make any score lower than the highest, you probably need to reevaluate your own expectations for test situations. Striving to always do your best is an admirable goal. Realistically knowing that your current *best* may not achieve the highest academic ratings can help you plot your progress.

Realistic continuous improvement is a better plan, because people who repeatedly attempt challenges for which they have not adequately prepared and understandably fail (or at least do not achieve the desired highest ranking) often start moving toward the goal in frustration. They simply quit. This doesn't mean you settle for mediocre grades or refrain from your challenges. It means you become increasingly aware of yourself and your current state and potential future. Know yourself, know your strengths and weaknesses, and be honest with yourself about your expectations.

Understanding Accommodations and Responsibilities

As with so many parts of life, some people take exams in stride and do just fine. Others may need more time or change of location or format to succeed in test-taking situations. With adequate notice, most faculty will provide students with reasonable accommodations to assist students in succeeding in test situations. If you feel that you would benefit from receiving these sorts of accommodations, first speak with your instructor. You may also need to talk to a student services advisor for specific requirements for accommodations at your institution.

If you need accommodations, you are responsible for understanding what your specific needs are and communicating your needs with your instructors. Before exams in class, you may be allowed to have someone else take notes for you, receive your books in audio form, engage an interpreter, or have adaptive devices in the classroom to help you participate. Testing accommodations may allow for additional time on the test, the use of a scribe to record exam answers, the use of a computer instead of handwriting answers, as well as other means to make the test situation successful. Talk to your instructors if you have questions about testing accommodations.

Prioritizing Time Surrounding Test Situations

Keep in mind that you don't have any more or less time than anyone else, so you can't *make time* for an activity. You can only use the time everyone gets wisely and realistically. Exams in college classes are important, but they are not the only significant events you have in your classes. In fact, everything leading up to the exam, the exam itself, and the post-exam activities are all one large continuum. Think of the exam as an event with multiple phases, more like a long-distance run instead of a 50-yard dash. Step back and look at the big picture of this timeline. Draw it out on paper. What needs to happen between now and the exam so you feel comfortable, confident, and ready?

If your instructor conducts some sort of pre-exam summary or prep session, make sure to attend. These can be invaluable. If this instructor does not provide that sort of formal exam prep, create your own with a group of classmates or on your own. Consider everything you know about the exam, from written instructions to notes you took in class, including any experiential notes you may have from previous exams, such as the possibility of bonus points for answering an extra question that requires some time

management on your part. You can read more about time management in Chapter 3.

GET CONNECTED

Which apps can help you study for a test, increase your memory, and even help you overcome test anxiety?

[Personal Zen](#) is a free online gaming app clinically proven to reduce stress and anxiety. The games retrain your brain to think more positively, reducing stress to help you focus on the experiences around you.

Games like solitaire, hangman, and Simon Says all build on your memory, keeping it sharp and active. There are loads of fun, free online memory games you can use to make time wasting a little less wasteful. For more than 250 options, visit the [Memory Improvement Tips](#) website.

[iTunes University](#) might be able to help you dig into a research topic or find additional content to help you if you're struggling with a course. Their library of free lectures and content comes from some of the most highly respected universities around the world.

[Cegg Prep](#) is a flashcard-based self-quizzing resource. It provides millions of pre-made flashcards and decks organized by course and topic, which you can search, sort, bookmark, and use in a variety of ways. The service is free and does not require a login unless you'd like to save or create your own cards.

Test Day

Once you get to the exam session, try your best to focus on nothing but the exam. This can be very difficult with all the distractions in our lives. But if you have done all the groundwork to attend the

classes, completed the assignments, and scheduled your exam prep time, you are ready to focus intently for the comparatively short time most exams last.

Arriving to class:

Don't let yourself be sidetracked right at the end. Beyond the preparation we've discussed, give yourself some more advantages on the actual test day:

- Get to the testing location a few minutes early so you can settle into your place and take a few relaxing breaths.
- Don't let other classmates interrupt your calmness at this point.
- Just get to your designated place, take out whatever supplies and materials you are allowed to have, and calm your mind.

Taking the test:

Once the instructor begins the test:

- Listen carefully for any last-minute oral directions that may have changed some detail on the exam, such as the timing or the content of the questions.
- As soon as you receive the exam sheet or packet, make a quick scan over the entire test.
- Don't spend a lot of time on this initial glance, but make sure you are familiar with the layout and what you need to do.
- Using this first review, decide how you will allocate your available time for each section.
- You can even jot down how many minutes you can allow for the different sections or questions.

Then for each section, if the exam is divided this way, be sure you **read the section directions** very carefully so you don't miss an important detail. For example, instructors often offer options—so you may have four short-answer questions from which to choose, but you only need to answer two of them. If you had not read the

directions for that section, you may have thought you needed to provide answers to all four prompts. Working on extra questions for which you likely will receive no credit would be a waste of your limited exam time. The extra time you spend at the beginning is like an investment in your overall results.

Answer every required question on the exam. Even if you don't complete each one, you may receive some credit for partial answers. Whether or not you can receive partial credit would be an excellent question to ask before the exam during the preparation time. If you are taking an exam that contains multiple-choice questions, go through and answer the questions about which you are the most confident first.

Read the entire question carefully even if you think you know what the stem (the introduction of the choices) says, and read all the choices. Skip really difficult questions or ones where your brain goes blank. Then you can go back and concentrate on those skipped ones later after you have answered the majority of the questions confidently. Sometimes a later question will trigger an idea in your mind that will help you answer the skipped questions.

And, in a similar fashion to spending a few minutes right at the beginning of the test time to read the directions carefully and identify the test elements, **allow yourself a few minutes at the end of the exam session to review your answers.** Depending on what sort of exam it is, you can use this time to check your math computations, review an essay for grammatical and content errors, or answer the difficult multiple-choice questions you skipped earlier. Finally, **make sure you have completed the entire test:** check the backs of pages, and verify that you have a corresponding answer section for every question section on the exam. It can be easy to skip a section with the idea you will come back to it but then forget to return there, which can have a significant impact on your test results.

After the Test

As you leave the exam room, the last thing you may want to think about is that particular test. You probably have numerous other assignments, projects, and life obligations to attend to, especially if you pushed some of those off to study for this completed exam. Give yourself some space from this exam, but only for the duration of the time when your instructor is grading your exam. Once you have your results, study them—whether you did really well (Go, you!) or not as well as you had hoped (Keep your spirits up!). Both scenarios hold valuable information if you will use it.

Thandie had a habit of going all-out for exams before she took them, and she did pretty well usually, but once the instructor passed back the graded tests, she would look at the letter grade, glance half-heartedly at the instructor's comments, and toss the exam away, ready to move on to the next chapter, section, or concept. A better plan would be to learn from her exam results and analyze both what she did well and where she struggled. After a particularly unimpressive exam outing in her statistics class, Thandie took her crumpled-up exam to the campus tutoring center, where the tutor reviewed the test with her section by section. Together they discovered that Thandie did particularly well on the computational sections, which she admitted were her favorites, and not well at all on the short-answer essay questions that she did not expect to find in a stats class, which in her experience had been more geared toward the mathematical side of solving statistical problems.

Going forward in this class, Thandie should practice writing out her explanations of how to compute the problems and talk to her instructor about ways to hone this skill. This tutoring session also proved to Thandie the benefit of holding on to important class papers—either electronically or in hard copy, depending on the class setup—for future reference. For some classes, you probably don't need to keep every scrap of paper (or file) associated with your notes, exams, assignments, and projects, but for others, especially for those in your major, those early class materials may come in very

handy in your more difficult later undergraduate courses or even in grad school when you need a quick refresher on the basic concepts.

Test Anxiety



Figure 6.10 Text anxiety can be a common occurrence, but you can use strategies to manage it.

Test anxiety is very real. You may know this firsthand. Almost everyone gets a little nervous before a major exam, in the same way most people get slightly anxious meeting a new potential date or undertaking an unfamiliar activity. We second-guess whether we're ready for this leap, if we prepared adequately, or if we should postpone this potentially awkward situation. And in most situations, testing included, that reasonable level of nervous anticipation can be a good thing—enhancing your focus and providing you with a bit of bravado to get you through a difficult time.

Test anxiety, however, can cause us to doubt ourselves so severely

that we underperform or overcompensate to the point that we do not do well on the exam. Don't despair; you can still succeed if you suffer from test anxiety. The first step is to understand what it is and what it is not, and then to practice some simple strategies to cope with your anxious feelings relative to test taking. Whatever you do, don't use the label *test anxiety* to keep you from your dreams of completing your education and pursuing whatever career you have your eyes on. You are bigger than any anxiety.

Understanding Test Anxiety

If someone tries to tell you that test anxiety is *all in your head*, they're sort of right. Our thinking is a key element of anxiety of any sort. On the other hand, test anxiety can manifest itself in other parts of our bodies as well. You may feel queasy or light-headed if you are experiencing test anxiety. Your palms may sweat, or you may become suddenly very hot or very cold for no apparent reason. At its worst, test anxiety can cause its sufferers to experience several unpleasant conditions including nausea, diarrhea, and shortness of breath. Some people may feel as though they may throw up, faint, or have a heart attack, none of which would make going into a testing situation a pleasant idea. You can learn more about symptoms of test anxiety from the Anxiety and Depression Association of America that conducts research on this topic.¹²

Back to our minds for a minute. We think constantly, and if we have important events coming up, such as exams, but other significant events as well, we tend to think about them seemingly all the time. Almost as if we have a movie reel looping in our heads, we can anticipate everything that may happen during these events—both sensational results and catastrophic endings. What if you oversleep on the test day? What if you're hit by a bus on the way to campus? What if you get stung by a mysterious insect and have to save the world on the very day of your exam?

How about the other way? You win the lottery! Your screenplay is

accepted by a major publisher! You get a multimillion-dollar record deal! It could happen. Typically, though, life falls somewhere in between those two extremes, unless you live in an action movie. Our minds, however, (perhaps influenced by some of those action movies or spy novels we've seen and read) often gravitate to those black-and-white, all-or-nothing results. Hence, we can become very nervous when we think about taking an exam because if we do really poorly, we think, we may have to face consequences as dire as dropping out of school or never graduating. Usually, this isn't going to happen, but we can literally make ourselves sick with anxiety if we dwell on those slight possibilities. You actually may encounter a few tests in your academic careers that are so important that you have to alter your other life plans temporarily, but truly, this is the exception, not the rule. Don't let the most extreme and severe result take over your thoughts. Prepare well and do your best, see where you land, and then go from there.

Using Strategies to Manage Test Anxiety

You have to work hard to control test anxiety so it does not take an unhealthy hold on you every time you face a test situation, which for many of you will last well into your careers. One of the best ways to control test anxiety is to be prepared for the exam. You can control that part. You can also learn effective relaxation techniques including controlled breathing, visualization, and meditation. Some of these practices work well even in the moment: at your test site, take a deep breath, close your eyes, and smile—just bringing positive thoughts into your mind can help you meet the challenges of taking an exam without anxiety taking over.

The tests in the corporate world or in other career fields may not look exactly like the ones you encounter in college, but professionals of all sorts take tests routinely. Again, being prepared helps reduce or eliminate this anxiety in all these situations. Think of a presentation or an explanation you have provided well

numerous times—you likely are not going to feel anxious about this same presentation if asked to provide it again. That's because you are prepared and know what to expect. Try to replicate this feeling of preparation and confidence in your test-taking situations.

Many professions require participants to take frequent licensing exams to prove they are staying current in their rapidly changing work environments, including nursing, engineering, education, and architecture, as well as many other occupations. You have tools to take control of your thinking about tests. Better to face it head-on and let test anxiety know who's in charge!

Footnotes

- [12](#)Reteguiz, Jo-Ann. "Relationship between anxiety and standardized patient test performance in the medicine clerkship." *Journal of general internal medicine* vol. 21,5 (2006): 415-8. doi:10.1111/j.1525-1497.2006.00419.

22. Writing Summaries

What is a Summary?

A summary is a comprehensive and objective restatement of the main ideas of a text (an article, book, movie, event, etc.) Stephen Wilhoit, in his textbook *A Brief Guide to Writing from Readings*, suggests that keeping the qualities of a good summary in mind helps students avoid the pitfalls of unclear or disjointed summaries. These qualities include:

Neutrality – The writer avoids inserting his or her opinion into the summary, or interpreting the original text’s content in any way. This requires that the writer avoids language that is evaluative, such as: good, bad, effective, ineffective, interesting, boring, etc. Also, keep “I” out of the summary; instead, summary should be written in grammatical 3rd person (For example: “he”, “she”, “the author”, “they”, etc).

Brevity – The summary should not be longer than the original text, but rather highlight the most important information from that text while leaving out unnecessary details while still maintaining accuracy.

Independence – The summary should make sense to someone who has not read the original source. There should be no confusion about the main content and organization of the original source. This also requires that the summary be accurate.

By mastering the craft of summarizing, students put themselves in the position to do well on many assignments in college, not just English essays. In most fields (from the humanities to the soft and hard sciences) summary is a required task. Being able to summarize lab results accurately and briefly, for example, is critical in a chemistry or engineering class. Summarizing the various theories

of sociology or education helps a person apply them to his or her fieldwork. In college, it's imperative we learn how to summarize well because we are asked to do it so often.

College students are asked to summarize material for many different types of assignments. In some instances, summarizing one source is often the sole purpose of the entire assignment. Students might also be asked to summarize as just one aspect of a larger project, such as a literature review, an abstract in a research paper, or a works consulted entry in an annotated bibliography.

Some summary assignments will expect students to condense material more than others. For example, when summary is the sole purpose of the assignment, the student might be asked to include key supporting evidence, where as an abstract might require students to boil down the source text to its bare-bones essentials.

What Makes Something a Summary?

When you ask yourself, after reading an article (and maybe even reading it two or three times), “What was that article about?” and you end up jotting down—from memory, without returning to the original article to use its language or phrases—three things that stood out as the author's main points, you are summarizing. Summaries have several key characteristics.

You're summarizing well when you

- use your own words
- significantly condense the original text
- provide accurate representations of the main points of the text they summarize
- avoid personal opinion.

Summaries are much shorter than the original material—a general

rule is that they should be no more than 10% to 15% the length of the original, and they are often even shorter than this.

It can be easy and feel natural, when summarizing an article, to include our own opinions. We may agree or disagree strongly with what this author is saying, or we may want to compare their information with the information presented in another source, or we may want to share our own opinion on the topic. Often, our opinions slip into summaries even when we work diligently to keep them separate. These opinions are not the job of a summary, though. A summary should *only* highlight the main points of the article.



Focusing on just the ideas that best support a point we want to make or ignoring ideas that don't support that point can be tempting. This approach has two significant problems, though:

First, it no longer correctly represents the original text, so it misleads your reader about the ideas presented in that text. A summary should give your reader an accurate idea of what they can expect if we pick up the original article to read.

Second, it undermines your own credibility as an author to not represent this information accurately. If readers cannot trust an author to accurately represent source information, they may not be as likely to trust that author to thoroughly and accurately present a reasonable point.

How Should I Organize a Summary?

Like traditional essays, summaries have an introduction, a body, and a conclusion. What these components look like will vary some based on the purpose of the summary you're writing. The introduction, body, and conclusion of work focused specifically around summarizing something is going to be a little different than in work where summary is not the primary goal.

Introducing a Summary

One of the trickier parts of creating a summary is making it clear that this is a summary of someone else's work; these ideas are not your original ideas. You will almost always begin a summary with an introduction to the author, article, and publication so the reader knows what we are about to read. This information will appear again in your bibliography, but is also useful here so the reader can follow the conversation happening in your paper. You will want to provide it in both places.

In summary-focused work, this introduction should accomplish a few things:

- Introduce the name of the author whose work you are summarizing.
- Introduce the title of the text being summarized.
- Introduce where this text was presented (if it's an art installation, where is it being shown? If it's an article, where was that article published? Not all texts will have this component—for example, when summarizing a book written by one author, the title of the book and name of that author are sufficient information for your readers to easily locate the work you are summarizing).

- State the main ideas of the text you are summarizing—just the big-picture components.
- Give context when necessary. Is this text responding to a current event? That might be important to know. Does this author have specific qualifications that make them an expert on this topic? This might also be relevant information.

So, for example, if you were to get an assignment asking you to summarize Matthew Hutson's *Atlantic* article, "[Beyond the Five Senses](#)," an introduction for that summary might look something like this:

In his July 2017 article in *The Atlantic*, "Beyond the Five Senses," Matthew Hutson explores ways in which potential technologies might expand our sensory perception of the world. He notes that some technologies, such as cochlear implants, are already accomplishing a version of this for people who do not have full access to one of the five senses. In much of the article, though, he seems more interested in how technology might expand the ways in which we sense things. Some of these technologies are based in senses that can be seen in nature, such as echolocation, and others seem more deeply rooted in science fiction. However, all of the examples he gives consider how adding new senses to the ones we already experience might change how we perceive the world around us.

However, you will probably find yourself more frequently using summary as just one component of work with a wide range of goals (not just a goal to "summarize X").

Summary introductions in these situations still generally need to

- name the author
- name the text being summarized
- state just the relevant context, if there is any (maybe the author has a specific credential that makes their work on this topic carry more weight than it would otherwise, or

maybe the study they generated is now being used as a benchmark for additional research)

- introduce the author's full name (first and last names) the first time you summarize part of their text. If you summarize pieces of the same text more than once in a work you are writing, each time you use their text after that initial introduction of the source, you will only use the author's last name as you introduce that next summary component.

Presenting the “Meat” (or Body) of a Summary

Again, this will look a little different depending on the purpose of the summary work you are doing. Regardless of how you are using summary, you will introduce the main ideas throughout your text with transitional phrasing, such as “One of [Author's] biggest points is...,” or “[Author's] primary concern about this solution is...”

If you are responding to a “write a summary of X” assignment, the body of that summary will expand on the main ideas you stated in the introduction of the summary, although this will all still be very condensed compared to the original. What are the key points the author makes about each of those big-picture main ideas? Depending on the kind of text you are summarizing, you may want to note how the main ideas are supported (although, again, be careful to avoid making your own opinion about those supporting sources known).

When you are summarizing with an end goal that is broader than just summary, the body of your summary will still present the idea from the original text that is relevant to the point you are making (condensed and in your own words).

Since it is much more common to summarize just a single idea or point from a text in this type of summarizing (rather than all of its main points), it is important to make sure you understand the

larger points of the original text. For example, you might find that an article provides an example that opposes its main point in order to demonstrate the range of conversations happening on the topic it covers. This opposing point, though, isn't the main point of the article, so just summarizing this one opposing example would not be an accurate representation of the ideas and points in that text.

Concluding a Summary

For writing in which summary is the sole purpose, here are some ideas for your conclusion.

- Now that we've gotten a little more information about the main ideas of this piece, are there any connections or loose ends to tie up that will help your reader fully understand the points being made in this text? This is the place to put those.
- This is also a good place to state (or restate) the things that are most important for your readers to remember after reading your summary.
- Depending on your assignment, rather than providing a formal concluding paragraph where you restate the main points and make connections between them, you may want to simply paraphrase the author's concluding section or final main idea. Check your assignment sheet to see what kind of conclusion your instructor is asking for.

When your writing has a primary goal other than summary, your conclusion should

- discuss the summary you've just presented. How does it support, illustrate, or give new information about the point you are making in your writing? Connect it to your own main point for that paragraph so readers understand clearly why it

deserves the space it takes up in your work. (Note that this is still not giving your opinion on the material you've summarized, just making connections between it and your own main points.)

This chapter is adapted from *A Guide to Rhetoric*, Chapter 5.1, "[Writing Summaries](#)," by Melanie Gagich, [CC-BY-NC-SA](#) 4.0.

PART VI

DEGREE PLANNING AND GOAL-SETTING

23. Degree Planning and Goal-Setting: Introduction



Figure 4.1 Credit: University of the Fraser Valley / Flickr / Attribution 2.0 Generic (CC-BY 2.0)

Student Survey

How do you feel about your readiness to create an academic and life plan? These questions will help you determine how the chapter concepts relate to you right now. As you are introduced to new concepts and practices, it can be informative to reflect on how your understanding changes over time. We'll revisit these questions at the end of the chapter to see whether your feelings have changed. Take this quick survey to figure it out, ranking questions on a scale of 1–4, 1 meaning “least like me” and 4 meaning “most like me.”

1. I have reflected on and can identify my personal values.
2. I have set both short- and long-term academic goals.
3. I am familiar with the requirements I must complete and options I must select to obtain a college degree.
4. I am familiar with the resources, tools, and individuals who can

assist me in developing an effective plan for success.

You can also take the [Chapter 4 survey](#) anonymously online.

STUDENT PROFILE

“I came into my university with little to no knowledge about how to decide a college major. I can now say with confidence that I have found the major for me! This was not an easy process though. It takes a lot of reflection to decide where you will focus your time and energy for your college career. The most important thing I had to consider was what major would provide me with learning outcomes that matter the most to me? I switched my major three or four times and each time I weighed the pros and cons of the major I was exiting and the one I was transitioning into. I decided to major in sociology and it has been the best decision of my academic career! I value social awareness and deep understandings of social phenomenon and sociology provided the course material necessary to place me on a path to begin learning about those topics. As a first-generation and low-income student navigating college pathways can be difficult. That is why it is so important to be open to change and set on learning what you want to learn how to get yourself to the next step!”

—**Drew Carter**, Rice University

About This Chapter

Among the most celebrated differences between high school and college is the freedom that students look forward to when they complete their mandatory high school education and take up the voluntary pursuit of a college degree. Though not every college

freshman comes fresh from high school, those who do might be looking forward to the freedom of moving away from home onto a campus or into an apartment. Others might be excited about the potential to sleep in on a Monday morning and take their classes in the afternoon. For others, balancing a class schedule with an already-busy life filled with work and other responsibilities may make college seem less like freedom and more like obligation. In either case, and however they might imagine their next experience to be, students can anticipate increased freedom of choice in college and the ability to begin to piece together how their values, interests, and developing knowledge and skills will unfold into a career that meets their goals and dreams.

In Chapter 3, *Managing Your Time and Priorities*, we cover how goal setting and prioritizing help you plan and manage your time effectively. This chapter extends that discussion by recognizing that it can be challenging to stay on task and motivated if you don't see how those tasks fit into a larger plan. Even the freedom to choose can become overwhelming without a plan to guide those choices. The goal of this chapter is to help you develop the personal skills and identify the resources, tools, and support people to help you make sense of your choices and formulate a personal academic and career plan. We will also consider how to take those first steps toward making your plan a reality and what to do if or when you realize you're off track from where you had hoped to be.

By the time you complete this chapter, you should be able to do the following:

- Use your personal values to guide your decision-making, set short-term goals that build toward a long-term goal, and plan how you will track progress toward your goals.
- List the types of college certificates, degrees, special programs, and majors you can pursue, as well as general details about their related opportunities and requirements.
- Take advantage of resources to draft and track an academic plan.

- Recognize decision-making and planning as continuous processes, especially in response to unexpected change.

24. Defining Values and Setting Goals

Questions to consider:

- What beliefs help shape your decision-making and goals?
- How do you set manageable goals that will help you stay on track?



Figure 4.2 Figuring out the best major and your academic pathway can be confusing and challenging. (Credit: Bruce Mars / Pexels)

“In every single thing you do, you are choosing a direction. Your life is a product of choices.”

— Dr. Kathleen Hall, CEO of the Stress Institute and Mindful Living Network¹

A recent high school graduate, Mateo was considering his options for the future. He knew he wanted to go to college, but he wasn't quite sure what he would study. At a family picnic to celebrate his

graduation, he talked about his indecision with his two uncles. One uncle, his Uncle Nico, told him that his best bet was to find out what types of jobs would be hiring in a couple years at high enough salary for Mateo to afford to live however he desired. His other uncle, who rarely agreed with Uncle Nico, nodded and said, “Hey, that’s one way to look at it, but don’t you want to enjoy what you do every day regardless of how much money you make? You should do whatever interests you. After all, don’t they say that if you love what you do, you’ll never work a day in your life?”

Mateo appreciated the advice of his uncles and realized that they might both be right. He wanted to do something that interested him, but he also wanted to be employable and to make money. Clarifying his interests and recognizing his values would be key to helping Mateo decide his path.

Values

Values are the basic beliefs that guide our thinking and actions. Whether we are consciously aware of them or not, values influence both our attitudes and our actions. They help us determine what is important and what makes us happy. It is important to think about and reflect on your values, especially as you make decisions.

ACTIVITY

Determining Your Values

To begin to identify some of your personal values, consider the examples listed below. As a first step, select the five that you find most important, that bring you the greatest happiness, or that make

you feel the most proud. Then, rank those five values in order of importance. Feel encouraged to write in other options that are relevant to you.

Achievement	Efficiency	Hard Work	Positivity
Adventure	Empathy	Health	Security
Ambition	Equality	Honesty	Selflessness
Balance	Excellence	Honor	Service
Belonging	Exploration	Humility	Simplicity
Calm	Fairness	Independence	Spontaneity
Challenge	Faith	Intelligence	Stability
Commitment	Family	Joy	Strength
Community	Fitness	Justice	Success
Competition	Flexibility	Love	Trustworthiness
Contribution	Freedom	Loyalty	Understanding
Control	Friends	Making a Difference	Uniqueness
Creativity	Fun	Merit	
Curiosity	Generosity	Openness	
Dependability	Growth	Originality	
Diversity	Happiness	Perfection	

Table 4.1

Another way to recognize the important influence of values is to consider if you have ever made a decision that you later regretted. Did you reflect on your values prior to making that choice? Sometimes others ask us to do things that are inconsistent with our values. Knowing what you value and making plans accordingly is an important effort to help you stay on track toward your goals.

ANALYSIS QUESTION

Recall a decision that you have recently made (for example, a smaller decision about how to spend your Saturday, or maybe a larger decision about where to apply for part-time work). Did the values you identified through this exercise influence that decision? If so, how?



Figure 4.3 Credit: Curt Smith / Flickr / Attribution 2.0 Generic (CC-BY 2.0)

Goals and Planning

Have you ever put together a jigsaw puzzle? Many people start by looking for the edge and corner pieces to assemble the border. Some will then group pieces with similar colors, while others just try to fit in new pieces as they pick them up. Regardless of strategy, a jigsaw puzzle is most easily solved when people have a picture to reference. When you know what the picture should look like, you can gauge your progress and avoid making mistakes. If you were

to put a puzzle together facedown (cardboard side up, rather than picture side up), you could still connect the pieces, but it would take you much longer to understand how it should fit together. Your attempts, beyond the border, would be mostly by trial and error. Pursuing anything without goals and a plan is like putting together an upside-down puzzle. You can still finish, or get to where you're meant to be, but it will take you much longer to determine your steps along the way.

In Chapter 3, you learned about the SMART goal method for setting actionable goals, or goals that are planned and stated with enough clarity for the goal-setter to take realistic action toward meeting those goals. SMART goals help you focus on your priorities and manage your time while also providing a means of organizing your thinking and actions into manageable steps. Long- and short-term goals help to connect the action steps.

Long-Term Goals

Long-term goals are future goals that often take years to complete. An example of a long-term goal might be to complete a bachelor of arts degree within four years. Another example might be purchasing a home or running a marathon. While this chapter focuses on academic and career planning, long-term goals are not exclusive to these areas of your life. You might set long-term goals related to fitness, wellness, spirituality, and relationships, among many others. When you set a long-term goal in any aspect of your life, you are demonstrating a commitment to dedicate time and effort toward making progress in that area. Because of this commitment, it is important that your long-term goals are aligned with your values.

Short-Term Goals

Setting short-term goals helps you consider the necessary steps you'll need to take, but it also helps to chunk a larger effort into smaller, more manageable tasks. Even when your long-term goals are SMART, it's easier to stay focused and you'll become less overwhelmed in the process of completing short-term goals.

You might assume that short-term and long-term goals are different goals that vary in the length of time they take to complete. Given this assumption, you might give the example of a long-term goal of learning how to create an app and a short-term goal of remembering to pay your cell phone bill this weekend. These are valid goals, but they don't exactly demonstrate the intention of short- and long-term goals for the purposes of effective planning.

Instead of just being bound by the difference of time, short-term goals are the action steps that take less time to complete than a long-term goal, but that help you work toward your long-term goals. To determine your best degree option, it might make sense to do some research to determine what kind of career you're most interested in pursuing. Or, if you recall that short-term goal of paying your cell phone bill this weekend, perhaps this short-term goal is related to a longer-term goal of learning how to better manage your budgeting and finances.

Setting Long- and Short-Term Goals

Sunil's story provides an example of effective goal setting. While meeting with an academic advisor at his college to discuss his change of major, Sunil was tasked with setting long- and short-term goals aligned with that major. He selected a degree plan in business administration, sharing with his advisor his intention to work in business and hopefully human relations in particular. His advisor discussed with him how he could set short-term goals that

would help his progress on that plan. Sunil wondered if he should be as specific as setting short-term goals week by week or for the successful completion of every homework assignment or exam. His advisor shared that he could certainly break his goals down into that level of specificity if it helped him to stay focused, but recommended that he start by outlining how many credits or courses he would hope to complete. Sunil drafted his goals and planned to meet again with his advisor in another week to discuss.

My Goals – Sunil Shah	
Long-term	My goal is to graduate from my college in a total of 4 years with a degree in business administration, concentrating in human relations.
Short-term	<ul style="list-style-type: none">• Finish the 12 credits i am taking in my first semester with at least a 3.0 GPA• Take 15 credits in the spring semester while maintaining my GPA• Take a 3 credit class online in the summer• Take 15 credits in my third semester• Apply for study abroad program in my third semester• Take 18 credits in my fourth semester• Complete study abroad program for business during my fifth semester (12 credits)• Apply for summer internship program during fifth semester• Take 15 credits in my sixth semester• Complete summer internship program• Take 15 credits in my seventh semester• Take 15 credits in my eighth semester• Graduate in four years and take my parents out for an awesome dinner to thank them for their support!

Figure 4.4 Sunil drafted his goals before meeting with his advisor to discuss them.

Sunil worried that his list of short-term goals looked more like a checklist of tasks than anything. His advisor reassured him, sharing that short-term goals can absolutely look like a checklist of tasks because their purpose is to break the long-term goal down into manageable chunks that are easier to focus on and complete. His advisor then recommended that Sunil add to his plan an additional note at the end of every other semester to “check in” with his advisor to make certain that he was on track.

Planning for Adjustments

You will recall from the SMART goals goal-setting model that goals should be both measurable and attainable. Far too often, however, we set goals with the best of intentions but then fail to keep track of our progress or adjust our short-term goals if they're not helping us to progress as quickly as we'd like. When setting goals, the most successful planners also consider when they will evaluate their progress. At that time, perhaps after each short-term goal should have been met, they may reflect on the following:

1. **Am I meeting my short-term goals as planned?**
 - If so, celebrate!
 - If not, you may want to additionally consider:
2. **Are my short-term goals still planned across time in a way where they will meet my long-term goals?**
 - If so, continue on your path.
 - If not, reconsider the steps you need to take to meet your long-term goal. If you've gotten off track or if you've learned that other steps must be taken, set new short-term goals with timelines appropriate to each step. You may also want to seek some additional advice from others who have successfully met long-term goals that are similar to your own.
3. **Are my long-term goals still relevant, or have my values changed since I set my goals?**
 - If your goals are still relevant to your interests and values, then continue on your path, seeking advice and support as needed to stay on track.
 - If your goals are no longer relevant or aligned with your

values, give careful consideration to setting new goals.

While departing from your original goals may seem like a failure, taking the time to reflect on goals before you set them aside to develop new ones is a success. Pivoting from a goal to new, better-fitting goal involves increased self-awareness and increased knowledge about the processes surrounding your specific goal (such as the details of a college transfer, for example). With careful reflection and information seeking, your change in plans may even demonstrate learning and increased maturity!

APPLICATION

Take a moment to practice setting long- and short-term goals. Your short-term goal should help you progress toward your long-term goal. Include a plan for when and how you will know if you're on track or if you need to adjust your goals to match new priorities.

My Long-Term Goal:

My Short-Term Goal:

My Plan for Checking My Progress:

Table 4.2

Keep in mind that values and goals may change over time as you meet new people, your life circumstances change, and you gain more wisdom or self-awareness. In addition to setting goals and tracking your progress, you should also periodically reflect on your goals to ensure their consistency with your values.

ANALYSIS QUESTION

Now that you've set some goals, what is your plan to track your progress on those goals? Can you identify a time you will set aside to intentionally reflect on your progress and whether you need to set any new short-term goals or perhaps adjust your larger plans?

Footnotes

- [1](#)Hall, Kathleen. *Alter Your Life: Overbooked, Overworked, Overwhelmed?* Oak Haven Press. Georgia. 2005.

25. Planning Your Degree Path

To set goals for your academic and career path, you must first have an understanding of the options available for you to pursue and the requirements you will need to meet. The next section provides an overview of academic programs and college degrees that are common among many colleges and universities in the United States. Please note that each institution will have its own specific options and requirements, so the intention of this section is both to help you understand your opportunities and to familiarize you with language that colleges typically use to describe these opportunities. After reviewing this section, you should be better able to formulate specific questions to ask at your school or be better prepared to navigate and search your own college's website.

Types of Degrees

Whereas in most states high school attendance through the 12th grade is mandatory, or *compulsory*, a college degree may be pursued voluntarily. There are fields that do not require a degree. Bookkeeping, computer repair, massage therapy, and childcare are all fields where certification programs—tracks to study a specific subject or career without need of a complete degree—may be enough.

However, many individuals will find that an associate's or bachelor's degree is a requirement to enter their desired career field. According to United States Census data published in 2017, more than one-third of the adult population in the country has

completed at least a bachelor's degree, so this may be the degree that is most familiar to you.

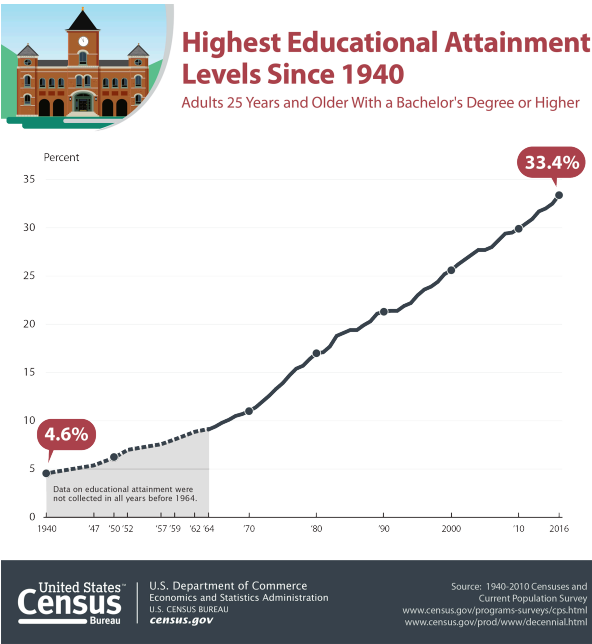


Figure 4.5 The number of American's receiving Bachelor's degrees has increased significantly. While not every job requires one, the level of overall education required for most careers continues to go up. (Credit: US Department of Commerce / Public Domain)

Not every job requires a bachelor's degree, and some require even higher degrees or additional specialized certifications. As you develop your academic plan, it is important to research your field of interest to see what requirements might be necessary or most desirable.

Require Associate's Degrees	Require Bachelor's Degrees	Require Additional Certifications	Require Graduate Degrees
Radiology Technician	Nurse	Public School Teacher	Lawyer
Dental Hygienist	Computer/Information Systems Manager	Accountant	College or University Professor
Web Developer	Airline Pilot	Financial Advisor	Pharmacist
Graphic Designer	Electrical Engineer		Marriage and Family Therapist
Automotive Technician	Construction Manager		Occupational Therapist

Table. Example Jobs by Minimum Degree Qualification²

To distinguish between the types of degrees, it is useful to understand that courses are often assigned a number of credits, sometimes called *semester hours* as well. Credits relate to the calculated hours during a course that a student spends interacting with the instructor and/or the course material through class time, laboratory time, online discussions, homework, etc. Courses at all degree levels are typically assigned a value of one to six credits, although students often need to complete a developmental education course or two, often in English or math. These requirements, which cost as much as typical college courses but do not grant college credit, are meant to provide some basic information students may have missed in high school but that will be necessary to keep up in college-level coursework.

The minimum or maximum number of credits required to graduate with different degrees varies by state or institution, but approximate minimum numbers of credits are explained below. Keep in mind that although a minimum number of credits must be completed to get a certain degree, total credits completed is not the only consideration for graduation—you must take your credits or courses in particular subjects indicated by your college.

To determine your best degree option, it might make sense to do some research to determine what kind of career you're most interested in pursuing. Visit your campus career center to meet with a counselor to guide you through this process. These services are free to students—similar services can be pricey once you've graduated, so take advantage. There are other tools online you can investigate.

Associate's Degrees

To enter an associate's degree program, students must have a high school diploma or its equivalent. Associate's degree programs may be intended to help students enter a technical career field, such as automotive technology, graphic design, or entry-level nursing in some states. Such technical programs may be considered an Associate of Applied Arts (AAA) or Associate of Applied Science (AAS) degrees, though there are other titles as well.

Other associate's degree programs are intended to prepare a student with the necessary coursework to transfer into a bachelor's degree program upon graduation. These transfer-focused programs usually require similar general education and foundational courses that a student would need in the first half of a bachelor's degree program. Transfer-focused associate's degrees may be called Associate of Arts (AA) or Associate of Science (AS), or other titles, depending on the focus of study.



Figure. Air traffic controllers are extremely important and well-paid jobs that typically require an associates degree. (Credit: Expert Infantry / Flickr / Attribution 2.0 Generic (CC-BY 2.0))

An associate's degree is typically awarded when a student has completed a minimum of 60 credits, approximately 20 courses, meeting the requirements of a specific degree. Some technical associate's degrees, such as nursing, may require additional credits in order to meet requirements for special certifications. You may find that your college or university does not offer associate's degrees. Most associate's degrees are offered by community or junior colleges, or by career and technical colleges.

Bachelor's Degrees

When someone generally mentions “a college degree,” they are often referring to the bachelor's degree, or baccalaureate degree. Because it takes four years of full-time attendance to complete a bachelor's degree, this degree is also referred to as a “four-year degree.” Similar to an associate's degree, to enter a bachelor's degree

program a student must have completed a high school diploma or its equivalent. Both associate's degrees and bachelor's degrees are considered *undergraduate degrees*, thus students working toward these degrees are often called *undergraduates*. A student with an associate's degree may transfer that degree to meet some (usually half) of the requirements of a bachelor's degree; however, completion of an associate's degree is not necessary for entry into a bachelor's degree program.

A bachelor's degree is usually completed with a minimum of 120 credits, or approximately 40 courses. Some specialized degree programs may require more credits. (If an associate's degree has been transferred, the number of credits from that degree usually counts toward the 120 credits. For example, if an associate's degree was 60 credits, then a student must take 60 additional credits to achieve their bachelor's degree.)

Bachelor of Arts (BA), Bachelor of Science (BS), Bachelor of Science in Nursing (BSN), and Bachelor of Fine Arts (BFA) are the most popular degree titles at this level and differ primarily in their focus on exploring a broader range of subject areas, as with a BA, versus focusing in more depth on a particular subject, as with a BS, BSN, or BFA. Regardless of whether a student is pursuing a BA, BS, BSN, or BFA, each of these programs requires a balance of credits or courses in different subject areas. In the United States, a bachelor's degree comprises courses from three categories: *general education* courses, *major* courses, and *electives*. A fourth category of courses would be those required for a minor, which we will discuss in more detail in the section on majors and minors.

General Education

General education, also called *core curriculum*, is a group of courses that are often set as requirements by your state or by your individual college. These courses provide you with a foundation of

knowledge across a breadth of fields and are also intended to help you further develop college-level critical-thinking and problem-solving abilities. You may be able to select courses from a general education menu of courses available at your institution. More than half of your bachelor's degree program is likely made up of general education courses.

GEM Courses at the College of Western Idaho

As you start your college journey at the College of Western Idaho (CWI), you'll encounter a crucial component of your education: General Education Matriculation (GEM) courses. These courses form the backbone of your associate's degree and provide a lot more than just academic credits. They equip you with skills that will serve you throughout your career and life.

The Idaho State Board of Education emphasizes that “Students need to understand how knowledge is generated and created in our rapidly changing world.” GEM courses do exactly that, offering a broad foundation across various disciplines while developing critical thinking and problem-solving abilities. At CWI, as well as all the other State institutions of higher learning, the GEM program consists of at least 36 credits spread across six core competency areas:

1. Written Communication
2. Oral Communication
3. Mathematical Ways of Knowing
4. Scientific Ways of Knowing
5. Humanistic and Artistic Ways of Knowing

6. Social and Behavioral Ways of Knowing

Additionally, students complete three institutionally designated courses: CWI 101 (a college orientation course), a Global Perspectives course, and an ethics-designated course chosen from designated courses interspersed in the list above.

The Skills embedded in GEM Courses

General education is more than a set of required courses. It's an opportunity to broaden your perspective and develop crucial skills that will prepare you for success in an ever-changing world. As you pursue your GEM courses at CWI, embrace the chance to grow not just academically, but personally and professionally as well. The durable skills taught in these courses will be your toolkit for success, no matter where your journey takes you after CWI. These durable skills include:

1. **Metacognition:** CWI 101 introduces you to the practice of goal setting, time management, planning and attention to detail.
2. **Character:** Our ethics-designated courses help you to figure out your unique moral viewpoint and how ethical decisions need to flow from that viewpoint.
3. **Mindfulness and Cultural Awareness:** Courses scattered throughout the GEM offerings help you practice active listening, empathy and increased cultural sensitivity...something we call global perspectives. Your Social and Behavioral courses

do an especially good job with this.

4. **Communication:** Through written and oral communication courses, you'll learn to express ideas clearly and effectively as well as evaluate your evidence to make the most accurate case possible.
5. **Critical Thinking:** Our courses challenge you to analyze information, solve problems, and make informed decisions, especially in our Math and Science courses.
6. **Growth Mindset:** By exposing you to diverse subjects, GEM courses encourage adaptability and lifelong learning. Our Artistic and Humanistic courses do this at a high level.
7. **Collaboration:** Many GEM courses also involve group projects, teaching you to work effectively in teams.
8. **Leadership:** Group projects and discussions in various courses help develop the leadership skills that will serve you well in the future.

If you would like more information on what durable skills are and why employers are asking for them, you can read more about them at <https://durable skills.org/>

How GEM courses transfer

Your GEM courses are designed with transferability in mind. Once you complete the 37 required credits of general education courses at CWI, you won't need to repeat or take additional GEM courses when you transfer to other Idaho public institutions (unless

required by your transfer major). This is a good time to remind you to check in early and often with your advisor to select the right GEM courses for your transfer degree, especially in Math and Science course selection.

Finally, as you progress through your associate's degree, you'll notice how at CWI, we've built all the GEM courses to build a foundation in three basic areas:

1. Cultural Thinking Skills: Global Perspectives and ethically designated courses teach you to consider diverse viewpoints and contexts.
2. Communication Skills: Written and oral communication courses, along with CWI 101, strengthen your ability to express ideas clearly and accurately.
3. Application Skills: Courses in mathematics, science, and humanities teach you to apply knowledge and solve real-world problems.

Majors and Minors

One of the most common questions an undergraduate college student will be asked is "What's your major?" As we already noted, your major is only one part of your undergraduate (associate's or bachelor's) degree, but it is the part that most demonstrates your interests and possible future goals. At some point during your studies you will be asked to decide on, or *declare*, a major. You may

also be able to select a *minor* or additional concentration. Whereas a major comprises approximately 10–12 courses of a bachelor's degree program and is required, a minor is usually 5–8 courses, is often optional, and may count toward or contribute to exceeding the total number of credits required for graduation. Rather than take elective courses, some students will select courses that meet the requirements for a minor. When selecting a major and possibly a minor, you'll want to consider how the knowledge and skills you gain through those fields of study prepare you for a particular career. Majors and minors can be complementary. For example, a major in business might be well-matched with a minor in a foreign language, thus allowing the student to pursue a career in business with a company that hires bilingual employees. It is important to research careers of interest to you when selecting your major and/or minor to determine what will best help you to meet your goals.



Figure. Many majors, such as nursing, allied health, and emergency medical technician, may include simulations and other activities to expose students to the real-world activities of their field. (Credit: COD Newsroom / Flickr / Attribution 2.0 Generic (CC-BY 2.0))

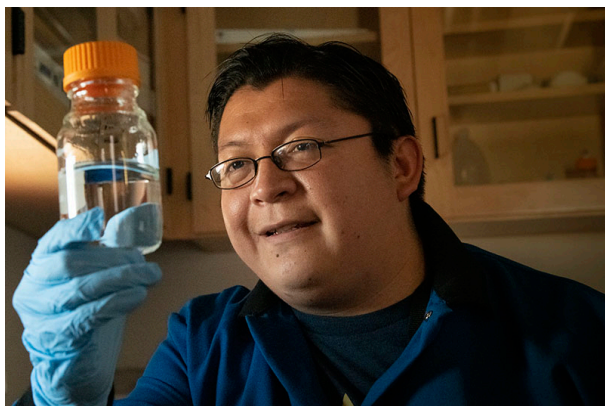
Electives

Electives are free-choice courses. Though you may have a choice to select from a menu of options to meet general education and major requirements, electives are even less restricted. Some students may be able to take more electives than others due to their choice of major or if they are able to take courses that meet more than one requirement (for example, a sociology course may be both a major requirement and a general education social science course). Some colleges intentionally allow room for electives in a program to ensure that students, particularly those students who are undecided about their major, are able to explore different programs without exceeding the total number of credits required to graduate with a bachelor's degree. In other cases, students may have taken all of their major courses and fulfilled their general education requirements but still need additional credits to fulfill the minimum to graduate. The additional courses taken to meet the total credit requirement (if necessary) are considered electives.

Graduate Degrees

According to United States Census data published in 2018, 13.1 percent of the U.S. adult population have completed advanced degrees.³ Whereas associate's and bachelor's degrees are considered undergraduate degrees and require high school graduation for entry, advanced degrees called graduate degrees require prior completion of a bachelor's degree. Some professions require graduate degrees as a minimum job qualification, such as pharmacists, lawyers, physical therapists, psychologists, and college professors. In other cases, students may be motivated to pursue a graduate degree to obtain a higher-level job or higher salary, or to be more competitive in their field. Some

students are also interested in learning about some subject in greater depth than they did at the undergraduate level. Because graduate degrees do not include general education or free elective courses, they are very focused on career-specific knowledge and skills. Graduate degrees include master's, doctoral, and professional degrees. *Master's degrees* often require 30–60 credits and take one to two years of full-time attendance to complete. Some master's degrees, like those for counselors, require supervised job experience as a component of the degree and therefore require more credits.



*Figure.
Pharmacists
and related
scientific or
medical
careers
require
master's
degrees.
(Credit: US
Department
of
Agriculture
/ Flickr /
Public
Domain)*

Doctorate and professional degrees are the highest level of advanced degrees. Approximately 3.5% of the U.S. adult population has completed a doctorate or professional degree. Very few careers require this level of education for entry, so fewer individuals pursue these degrees. Doctorates are offered in many subjects and primarily prepare students to become researchers in their field of study. This in-depth level of education often requires an additional 90–120 credits beyond the bachelor's degree, and may or may not require a master's degree prior to entry. (A master's degree as an entry requirement may reduce the number of credits required to complete the doctoral degree.)

Professional degrees are a specific type of doctorate-level degree that focus on skills to be applied in a *practical*, or hands-on, career rather than as a researcher. The most common professional degrees are Doctor of Medicine (MD) for aspiring medical doctors, Juris Doctor (JD) for aspiring lawyers, Doctor of Pharmacy (PharmD) for aspiring pharmacists, and Doctor of Education (EdD) for aspiring school and college or university administrators. If the career you are pursuing requires a graduate degree, you should keep this end goal in mind as you plan for the timeline and finances required to meet your goals. You may also want to inquire about special agreements that your college or university may have to expedite admission into or completion of graduate degrees. For example, some universities offer 4+1 *master's programs*, wherein students take both bachelor's and master's level courses during their last year as an undergraduate to accelerate the completion of both degrees.

Other Post-Baccalaureate Credentials

Post-baccalaureate refers to structured learning experiences pursued after a bachelor's degree is achieved. While some such activities are structured into graduate degrees as described in the sections above, other fields value continuing education credits, competency badges, and additional certifications. These post-baccalaureate credentials may need to be completed prior to entering a career field, may be obtained as an option to gain competitive advantage for hiring, or may be achieved during the course of an individual's career to stay current, maintain qualification, or be promoted. To determine if your field requires post-baccalaureate credentials, you may want to speak with an established professional in that career, review the qualifications section of related job descriptions, or visit with a career counselor on your campus. In a world that changes as rapidly as ours, engaging

in lifelong learning is advisable regardless of the specific requirements of any particular career choice.



Figure. Some computing, networking, and database careers require post-baccalaureate certificates. (Credit: WOCinTech Chat / Flickr / Attribution 2.0 Generic (CC-BY 2.0))

Preprofessional Programs

Some undergraduate degrees are specifically designed to prepare students to later pursue professional degrees (such as the MD or PharmD) at the graduate level. Such programs are called *preprofessional programs*, *preprofessional majors*, or *preprofessional tracks*. The most common preprofessional programs are premed, prelaw, and prepharmacy, but you may see other offerings. Although some preprofessional programs are structured as majors that you can declare, many preprofessional programs are a sequence of recommended courses and activities that a student can follow alongside a related major. While following a preprofessional program may not guarantee your admittance to a professional program, it does increase the likelihood of acceptance to and preparation for a graduate professional program.

Consider Loretta's story as an example of how a student might be on a preprofessional track. Loretta has decided that she would like

to become a medical doctor. She has declared biology as her major and is taking the courses required to graduate with a bachelor of science degree in biology. Her university does not have a premed major, but it does have a premed track. She informs her academic advisor of her career goals, and her advisor provides her information about the premed track. The premed track includes a list of courses that students should take to prepare for the medical school entrance exams, called MCATs. Some of these courses are biology courses that overlap with Loretta's biology major, while others are higher-level chemistry courses that are not required for her major. She can take these chemistry courses, and any other premed-track courses, as her elective courses. The premed track at Loretta's university includes opportunities to attend MCAT study workshops and premed student club meetings. It also provides recommendations for summer volunteering and internships that will strengthen Loretta's resume and application to medical school following the completion of her bachelor's degree.

Special Requirements of Majors

While preprofessional programs prepare students for entrance into graduate professional degree programs, some undergraduate majors involve special requirements beyond the usual courses and classroom experience to prepare students for entrance to their career. Such requirements provide students practical experience or prerequisites for licensure necessary for a particular job. When requirements are major-specific, it is often because the requirement is state-mandated for that job. Majors that often include state-mandated special requirements are education, social work, and nursing. Some colleges and universities may require all students to participate in additional experiences beyond their regular coursework. You will want to ask your college about details specific to your major or institution. In this section we will generally

discuss four such special requirements and experiences: fieldwork and internships, clinicals, student teaching, and service learning.

Fieldwork and Internships

Fieldwork and internships may also be referred to as *practicums* and field experience. These requirements provide hands-on work experience in a career, or *field*. When fieldwork or internships are required for your major, such as with a social work major, it is often listed as a course requirement among your major requirements. In other words, you usually receive credits for your fieldwork as you would for a lab or lecture course. Your fieldwork instructor will likely ask you to reflect on and report on your experiences. They will likely confer with a supervisor at your *fieldwork site*, the place where you are working, to help assess your hands-on learning. Fieldwork and internships provide students with opportunities to practice the skills they've learned in the classroom while also introducing them to the values and culture of the organizations and communities in which they hope to be employed. It is important to note that fieldwork and internship experiences are often available to students even if they are not required for their major. You may want to inquire with your academic advisors, faculty, or career services office to determine what opportunities might be available for you to gain this type of experience in your field of interest.

Clinicals

Clinicals are a type of fieldwork specifically required of nursing students. Clinicals may take place in hospitals, nursing homes, or mental health facilities. They provide nursing students who are nearing the end of their degree programs with the opportunity to practice nursing skills that cannot be learned in a regular classroom.

During clinicals, students will interact with real patients to conduct physical examinations, draw blood, administer medicine, and provide other care as necessary. Because of the risk to patients, students participating in clinicals are more closely supervised by experienced professionals than those in other types of fieldwork experiences. Thus, clinicals function very much like a real-world classroom and progress to more independent work through the semester. Before undertaking clinicals, nursing students will need to complete certain coursework and pass a physical examination and background check. Because clinicals are often much longer than a class meeting, students will need to work with staff from the program to plan their schedule. It may not be feasible to work at another job while completing clinicals, so if you must work while you're in college, it's important to discuss this with nursing staff or academic advisors and to plan ahead.

Student Teaching

Student teaching is a specific type of fieldwork undertaken by students who plan to teach at the preschool, elementary, or middle and high school levels. Education students are often required to complete a student teaching experience in order to obtain a teaching license in their state. Students must often complete core education coursework prior to student teaching and must complete a background check prior to placement in a school setting. During their student teaching experience, students are usually paired one-on-one with an experienced teacher and have the opportunity to observe that teacher, get to know the students, understand the classroom culture, and participate in lessons as a teaching assistant as needed or appropriate. Much like nursing clinicals, this highly supervised fieldwork experience usually progresses to more independent work when the student teacher is asked to deliver and reflect on a lesson plan of their own design. Keep in mind as you plan for student teaching that unlike other fieldwork experiences,

student teaching is limited to fall or spring semesters and cannot be completed in the summer because most schools are closed during the summer terms. Also, it may not be feasible to work at another job while completing your student teaching experience, so if you must work while you're in college, it's important to discuss this with your program staff or academic advisors and to plan ahead.



Figure. Student teaching is an extremely important aspect of becoming a K-12 educator. The experience helps future teachers practice their skills and understand the complexity of working in the classroom. (Credit: seansinnit / Flickr / Attribution 2.0 Generic (CC-BY 2.0))

Service Learning

While service learning may not be required of a specific major, you may see this special requirement for a course or as a general graduation requirement for your college or university. It's also an

excellent opportunity to try out something that interests you, something that could lead to or be part of your eventual career.

Service learning is very much like volunteering or community service. The purpose of service learning is to interact with and meet the needs of your local community. Service learning does differ from volunteering in that it is more structured to meet specific learning goals. For example, if you were engaging in service learning for an environmental science course, your activities would likely be focused on local environmental issues. Or, if you were engaging in service learning for a sociology course, you would likely be working with local community groups or organizations not only to assist these organizations, but also to observe how groups interact. Like fieldwork, service learning provides you an opportunity to observe and apply concepts learned in the classroom in a real-world setting. Students are often asked to reflect on their service learning activities in the context of what they've been learning in class, so if you're engaged in service learning, be thinking about how the activities you do relate to what you've learned and know.

Footnotes

- [2](#)Minimum degree qualifications may vary by state.
- [3](#)United States Census Bureau. (2019, February 21). Number of People with Master's and Doctoral Degrees Doubles Since 2000. Retrieved from: <https://www.census.gov/library/stories/2019/02/number-of-people-with-masters-and-phd-degrees-double-since-2000.html>

This chapter was adapted from *College Success*,
“[Planning Your Degree Path](#).” CC-BY 4.0

26. Making a SMART Plan

As previously noted, most associate's degrees require a minimum of 60 credit hours for completion, and bachelor's degrees minimally require a total of 120 credits. Some individuals refer to these degrees as "two-year" and "four-year" degrees, respectively. To complete a 60-credit associate's degree in two years, you would need to take 15 credits (about five classes) in the fall and spring semesters during both years of your attendance. To complete a 120-credit bachelor's degree in four years, you would need to take 15 credits in the fall and spring semesters each of your four years. It is therefore entirely possible to complete these degrees in two and four years, particularly if you use the three primary resources that colleges provide to help you with your planning: curriculum maps, academic advisors, and interactive planning technology. To get there, however, it helps to plan *a lot*. In this chapter we'll look at the SMART framework and then offer suggestions for how to plan your educational outlook more strategically.

SMART Goals

Motivation often means the difference between success and failure. That applies to school, to specific tasks, and to life in general. One of the most effective ways to keep motivated is to set goals.

Goals can be big or small. A goal can range from *I am going to write one extra page tonight*, to *I am going to work to get an A in this course*, all the way to *I am going to graduate in the top of my class so I can start my career with a really good position*. The great thing about goals is that they can include and influence a number of other things that all work toward a much bigger picture. For example, if your goal is to get an A in a certain course, all the reading, studying, and every

assignment you do for that course contributes to the larger goal. You have motivation to do each of those things and to do them well.

Setting goals is something that is frequently talked about, but it is often treated as something abstract. Like time management, goal setting is best done with careful thought and planning. This next section will explain how you can apply tested techniques to goal setting and what the benefits of each can be.

Set Goals That Motivate You

The first thing to know about goal setting is that a goal is a specific end result you desire. If the goal is not something you are really interested in, there is little motivational drive to achieve it. Think back to when you were much younger and some well-meaning adult set a goal for you—something that didn't really appeal to you at all. How motivated were you to achieve the goal? More than likely, if you were successful at all in meeting the goal, it was because you were motivated by earning the approval of someone or receiving a possible reward, or you were concerned with avoiding something adverse that might happen if you did not do what you were told. From an honest perspective in that situation, your real goal was based on something else, not the meeting of the goal set for you. To get the most from the goals you set, make sure they are things that you are interested in achieving.

That is not to say you shouldn't set goals that are supported by other motivations (e.g., If I finish studying by Friday, I can go out on Saturday), but the idea is to be intellectually honest with your goals.

Set SMART Goals

Goals should also be SMART. In this case, the word *smart* is not only

a clever description of the type of goal, but it is also an acronym that stands for Specific, Measurable, Attainable, Relevant, and Time-bound. The reason these are all desirable traits for your goals is because they not only help you plan how to meet the goal, but they can also contribute to your decision-making processes during the planning stage.

What does it mean to create SMART goals?

- **Specific**—For a goal to be specific, it must be defined enough to actually determine the goal. A goal of *get a good job when I graduate* is too general. It doesn't define what a good job is. In fact, it doesn't even necessarily include a job in your chosen profession. A more specific goal would be something like *be hired as a nurse in a place of employment where it is enjoyable to work and that has room for promotion*.
- **Measurable**—The concept of *measurable* is one that is often overlooked when setting goals. What this means is that the goal should have clearly defined outcomes that are detailed enough to measure and can be used for planning of how you will achieve the goal. For example, setting a goal of *doing well in school* is a bit undefined, but making a goal of *graduating with a GPA above 3.0* is measurable and something you can work with. If your goal is measurable, you can know ahead of time how many points you will have to earn on a specific assignment to stay in that range or how many points you will need to make up in the next assignment if you do not do as well as you planned.
- **Attainable**—*Attainable* or *achievable* goals means they are reasonable and within your ability to accomplish. While a goal of *make an extra one million dollars by the end of the week* is something that would be nice to achieve, the odds that you could make that happen in a single week are not very realistic.
- **Relevant**—For goal setting, *relevant* means it applies to the situation. In relation to college, a goal of *getting a horse to ride* is not very relevant, but *getting dependable*

transportation is something that would contribute to your success in school.

- **Time-bound**—Time-bound means you set a specific time frame to achieve the goal. *I will get my paper written by Wednesday* is time-bound. You know when you have to meet the goal. *I will get my paper written sometime soon* does not help you plan how and when you will accomplish the goal.

In the following table you can see some examples of goals that do and do not follow the SMART system. As you read each one, think about what elements make them SMART or how you might change those that are not.

Goal	Is it SMART?	
I am going to be rich someday.	No	There is nothing really specific, measurable, or time-bound in this goal.
I will graduate with my degree, on time.	Yes	The statement calls out specific, measurable, and time-bound details. The other attributes of attainable and relevant are implied.
I am going to save enough money to buy a newer car by June.	Yes	All SMART attributes are covered in this goal.
I would like to do well in all my courses next semester.	No	While this is clearly time-bound and meets most of the SMART goal attributes, it is not specific or measurable without defining what “do well” means.
I am going to start being a nicer person.	No	While most of the SMART attributes are implied, there is nothing really measurable in this goal.
I will earn at least a 3.0 GPA in all my courses next semester.	Yes	All of the SMART attributes are present in this goal.
I am going to start being more organized.	No	While most of the SMART attributes are implied, there is nothing really measurable in this goal.

Table 3.6

Curriculum Maps as SMART

Many colleges and universities will provide *curriculum maps*, or course checklists to illustrate the sequence of courses necessary to follow this timeline. You can view these maps as SMART strategies. They're providing a framework to meet long-term goals in more granular chunks.

These timelines often assume that you are ready to take college-level math and English courses and that you will be attending college as a full-time student. If placement tests demonstrate a need for prerequisite math and English coursework to get you up to speed, your timeline will likely be longer.

Many students attend college part-time, often because of family or work responsibilities. This will obviously have an impact on your completion timeline as well. Programs that have special requirements may also require that you plan for additional time. For example, it may be the case that you cannot take other courses while completing clinicals or student teaching, so you will need to plan accordingly. Alternatively, you may be able to speed up, or *accelerate*, your timeline to degree by taking courses during summer or winter terms. Or if you take fewer than 15 credits per semester, you can take courses during the summer terms to “make up” those credits and stay on track toward those two- or four-year graduation goals.⁴

Academic Advisors

All colleges and universities provide resources such as a curriculum map to assist you with your academic planning. Academic

advisors may also be called success coaches, mentors, preceptors, or counselors. They may be staff members, or faculty may provide advisement as an additional role to their teaching responsibilities. Regardless of what your college calls this role, academic advisors are individuals who are able to assist you in navigating the puzzle of your academic plan and piecing your courses and requirements together with your other life obligations to help you meet your goals.

An advisor is an expert on college and major requirements and policies, while you are the expert on your life circumstances and your ability to manage your study time and workload. It is also an advisor's responsibility to understand the details of your degree requirements. This person can teach you how to best utilize college resources to make decisions about your academic and career path. An advisor can help you connect with other college staff and faculty who might be integral to supporting your success. Together with your advisor, you can create a semester-by-semester plan for the courses you will take and the special requirements you will meet. Refer to the end of this section for a detailed planning template that you could use in this process. Even if your college does not require advising, it is wise to meet with your advisor every semester to both check your progress and learn about new opportunities that might lend you competitive advantage in entering your career.

Common Functions of Academic Advisors

Academic advisors can help you:

- Set educational and career goals
- Select a major and/or minor
- Understand the requirements of your degree
- Navigate the online tools that track the progress of your degree

- Calculate your GPA and understand how certain choices may impact your GPA
- Discuss your academic progress from semester to semester
- Assist with time management strategies
- Connect with other support and resources at the college such as counseling, tutoring, and career services
- Navigate institutional policies such as grade appeals, admission to special programs, and other concerns
- Strategize how to make important contacts with faculty or other college administrators and staff as necessary (such as discussing how to construct professional emails)
- Discuss transfer options, if applicable
- Prepare for graduate school applications

Interactive Planning Technology

In addition to a curriculum map and an advisor, colleges and universities usually have technological tools that can assist you in your academic planning. Degree audit reporting systems, for example, are programmed to align with degree requirements and can track individual student progress toward completion. They function like an interactive checklist of courses and special requirements. Student planning systems often allow students to plan multiple semesters online, to register for planned courses, and to track the progress of their plan. Though friends and family are well-intentioned in providing students with planning advice and can provide important points for students to consider, sometimes new students make the mistake of following advice without consulting their college's planning resources. It's important to bring all of these resources together as you craft your individual plan.

Despite all of the resources and planning assistance that is available to you, creating an individual plan can still be a daunting task. Making decisions about which major to pursue, when to take

certain courses, and whether to work while attending school may all have an impact on your success, and it is tough to anticipate what to expect when you're new to college. Taking the time to create a plan and to revise it when necessary is essential to making well-informed, mindful decisions. Spur-of-the-moment decisions that are not well-informed can have lasting consequences to your progress.

The key to making a mindful decision is to first be as informed as possible about your options. Make certain that you have read the relevant resources and discussed the possibilities with experts at your college. Then you'll want to weigh your options against your values and goals. You might ask: Which option best fits my values and priorities? What path will help me meet my goals in the timeframe I desire? What will be the impact of my decision on myself or on others? Being well-informed, having a clear sense of purpose, and taking the necessary time to make a thoughtful decision will help to remove the anxiety associated with making the "right" decision, and help you make the best decision for you.

ACTIVITY

Draft an Academic Plan

With the assistance of your instructor or academic advisor, find the curriculum map for your major or for an example major that you might be considering if you're still exploring. Use the information in the curriculum map to draft an academic plan for your undergraduate degree. This plan should include both a semester-by-semester sequence of courses and a list of related activities to help you progress toward your career or graduate school goals. Keep in mind any personal circumstances that may impact your plan (such as whether you'll need to attend part-time or full-time). You

may use the grid provided or utilize your college's student planning software if available. For your reference, you will find the start of an example grid from a dedicated environmental science student below.

Note: If your college offers courses using the quarter system rather than semesters, you may need to draft your own grid. You can find example planning grids for quarter systems online.

Example Semester # 1 : Fall 20__ __	Example Semester # 2 : Spring 20__ __
<p>List your planned courses here:</p> <p>English Composition 1 (3 credits)</p> <p>General Biology 1 + lab (4 credits)</p> <p>Environmental Science (4 credits)</p> <p>History of Western Civilization (3 credits)</p> <p>First Year Success Seminar (2 credits)</p> <p>Total semester credits – 16</p> <p>List your planned activities here:</p> <ul style="list-style-type: none">• Meet with my advisor to review my plan.• Attend an environmental science student club meeting.	<p>List your planned courses here:</p> <p>English Composition 2 (3 credits)</p> <p>General Biology 2 + lab (4 credits)</p> <p>Principles of Sustainability (3 credits)</p> <p><u>Pre-Calculus Mathematics (4 credits)</u></p> <p>Total semester credits – 14</p> <p>Total first year credits planned – 30</p> <p>List your planned activities here:</p> <ul style="list-style-type: none">• Visit with Career Services Office early to ask about summer volunteering related to my major
<p>Example Summer Plans:</p> <p>List your planned courses here: None this summer</p> <p>List your planned activities here: Volunteer for local road or park clean-up days or start one if none exist in my area, follow and read that blog I found about becoming an environmental policy advocate, and research possible internships for my 2nd or 3rd year.</p>	

Figure 4.15 This sample of an academic plan was completed with the help of a college advisor. Below you'll find a blank template that you can use (or adapt) for your own plan.

Planning for After Graduation

Students usually pursue a college degree with some additional end goal in mind, whether that goal is further study as a graduate student or entry into a desired career. As you develop a plan for your undergraduate studies, you can also plan pursuits outside of the classroom to prepare for these future goals. To begin planning for life after graduation, consider the experiences that would best complement your coursework. If you are not required to participate in fieldwork or internships, perhaps you could plan a summer internship to help you gain workplace experience and learn more about what you do and do not want to do. It is also valuable to gain leadership experience through participation in student clubs and organizations. Plan to find a club that matches your interests. Set a goal to attend regularly your first year and then run for a club leadership role in your second or third year.

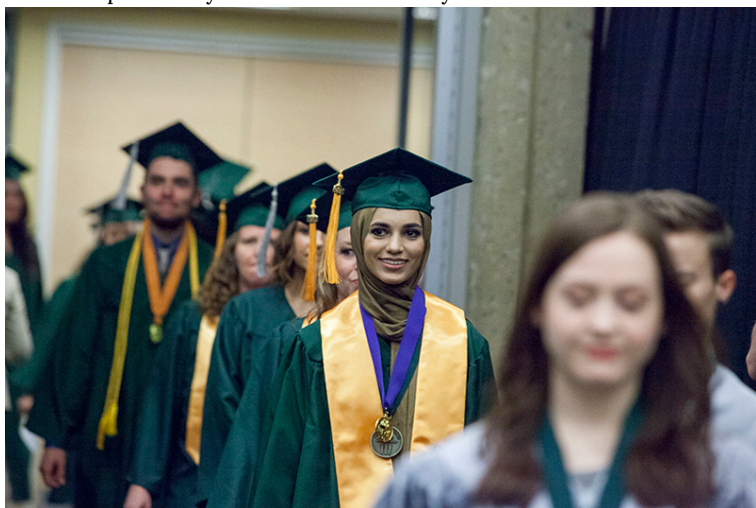


Figure 4.17 Graduation is a significant milestone, both for students and often for their families, friends, and support networks. A good academic plan will help you reach this important step, and then go far beyond it. (Credit: COD Newsroom / Flickr / Attribution 2.0 Generic (CC-BY 2.0))

Even before you begin an internship or career search in earnest, sites like [Internships.com](https://www.internships.com) can be helpful simply to explore the possibilities and get ideas. Often, a dedicated career-oriented website will provide more filtered and specific information than a general search engine.

Consult with services or offices at your college that can assist with you with making your future plans and incorporating experiences into your academic plan that will prepare you to enter your career. These services are often accessible both to current students as well as to graduates, providing assistance with résumé writing and job searches. Chapter 12: Planning for Your Future provides further insight into career planning and college career services.

Alumni associations help graduates connect with other former students of all ages so that they can begin to build and strengthen their professional networks, leading to further job opportunities. And don't discount the role of your professors in helping you build your network as well! In addition to providing valuable letters of recommendation for both graduate school and job applications, professors often have well-established professional networks and may be willing to help connect dedicated students with additional opportunities. You can plan these experiences to be distributed across your academic semesters and during the summer.

Exploring Options

- Locate and visit your career services office on campus to discover what services are available.
- Take a career assessment that matches your values, interests, and skills to career options.
- Join a student organization.
- Seek volunteer opportunities to gain additional skills.
- Research trends and salary expectations for careers of interest.

Gain Experience

- Develop relationships with faculty by visiting during office hours and speaking to them after class.
- Network with employers by attending career fairs.
- Pursue an internship or part-time employment that is relevant to your field of interest.
- Take a leadership role on campus or in a student organization.
- Practice for interviews with friends or career counselors.

Document Experiences

- Begin your resume and continuously update it to include new experiences.
- Create a LinkedIn profile.
- Review and monitor your social media accounts through the lens of a potential employer.
- Solidify relationships with faculty and ask about letters of recommendation.
- Draft additional job application materials, such as cover letters.
- Seek assistance from career counselors on campus in reviewing your resumes/cover letters/portfolios.

Table 4.5 Prepare for Your Career While in College

This Draft an Academic Plan activity provides you an opportunity to consider and plan experiences alongside your coursework that could help you better prepare to meet your career goals. Also, the chapter on Planning Your Career goes into these topics in more depth.

Footnotes

- ⁴ Brookdale Community College Office of Career and Leadership Development. (2016). *Your Career Checklist*. Retrieved from: <http://www.brookdalecc.edu/career>

27. Developing a Reflective Practice



Photo by Sheryl Third CC-BY-NC-SA

“Reflective practice is the ability to reflect on one’s actions so as to engage in a process of continuous learning”
– Donald Schön

What is Reflective Practice?

Whether we are conscious of this or not, we all undertake activities to think about our experiences, learn from them, and develop a plan for what we will continue to do (or stop doing). Can you think of a time when you came home at the end of a week where everything had gone wrong? Or maybe when everything had gone well? What

are your next steps? Are you able to answer the question, “Why am I doing what I am doing?”

In order to continue to develop a reflective practice that will serve us in college and in the workplace, we need to examine and understand the reasons for our reactions, our feelings, and our interactions with others. Creating a formal practice of reflection leads us to become a *reflective practitioner*.

Reflective practice has developed across many academic disciplines to help us intentionally learn from our experiences. There was a time when reflective practice would have been considered an optional skill or a desired disposition, but over the past few years, reflective practice is no longer considered an optional skill or disposition—it’s now essential to success.

Reflective practice has been explored and defined by many scholars including Bolton (2010), Moon (2001), Rodgers (2002), and Schön (1983). Reflective practice is a systematic, rigorous, self-directed meaning-making process where a person moves from one experience to another through the development of insights and practice with the intention of coming to a deeper understanding of one’s personal values and intellectual growth. Schön (1983) suggests that in practice, reflection often begins when a routine response produces a surprise or an unexpected outcome. The surprise gets our attention, which may begin a process of reflection. Reflective practice is “a dialogue of thinking and doing through which one becomes more skillful” (Schön, 1983, p. 56).

Example from the Workplace: Reflective Practice according to the

College of Early Childhood Educators of Ontario

Reflective Practice is an approach used by educators to analyze and think critically about their professional practice with the intention to better understand and improve their practice. Reflective practice is thoughtful, action-oriented and often, a collaborative effort. Educators use reflective practice to plan, evaluate their strengths and challenges, make decisions and create change, if necessary. Self-reflection, critical reflection and collaborative inquiry are all important elements of reflective practice (2017).

Notwithstanding the definitions given above, it's important to remember that reflection is a highly personal skill or disposition, and different people will define it in different ways. There is no one “right” way of defining what reflection is or how it should be done. Your ability to develop an effective reflective practice will depend on your own personal circumstances and school or work environment.

For this reason, this resource will explore elements of reflective practice that will help the practitioner develop their own practice. In describing reflective practice, I have interchangeably referred to it as a skill and/or a disposition . In the workplace, a skill is something that can be acquired, while a disposition is a way of being or a mindset. Current thinking suggests that reflection is not a skill but rather a way of being or disposition. Reflection involves

an evaluation of our ethics, values, and feelings around our experiences, both positive and negative.

To learn more about reflective practice, watch the video *Understanding Reflective Practice* by Lifetime Training.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=161#oembed-1>

Learn More about Reflective Practice

For more information on this topic, check out the resource links below.

- [Reflective Practice and Self-Directed Learning](#) by the College of Early Childhood Educators
- [Getting started with Reflective Practice](#) by Cambridge International Education Teaching and Learning Team
- Research Article [Revisiting reflective practice in an era of teacher education reform: A self-study of an early childhood teacher education program](#) by Sophia

Han, Jolyn Blank and Ilene R. Berson.

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Moon, J. (2001). *Short courses and workshops: Improving the impact of learning and professional development*. Kogan Page: London. [↴](#)

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This chapter is adapted from [Learning to teach: becoming a reflective practitioner](#) by [The Open University](#), licensed under the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](#).

28. A Brief Look at American Higher Education

The Ancient Roots of Higher Education

The roots of higher education stretch back thousands of years, to ancient times when people like you and me were just starting to get curious about the world. In Mesopotamia, around 3000 BCE, elite students were learning to read, write, and study things like religion and astronomy. This was the very beginning—kinda like the first school where they trained people to be the experts and leaders of their society.

Jump forward to Classical Greece with schools like Plato's Academy (established in 387 BCE) and Aristotle's Lyceum (founded in 335 BCE). This is where people really got into the art of asking questions—a lot of questions. They viewed education primarily in terms of debating and arguing to find the truth. This way of thinking influenced schools for thousands of years to come.

When the Roman Empire rolled around, education got an upgrade: it focused more on rhetoric and speaking skills, which were seen as important for public life. Rome's first law school was founded around 460 CE, while monks set up schools to train clergy starting in 550 CE. This mix of styles and goals—practical skills for everyday life, deep philosophical questioning, and religious education—laid the groundwork for what higher ed would become.

The Foundations of Universities

By the Middle Ages, universities started taking shape in Europe.

The University of Bologna, founded in 1088, is considered the oldest in the world. Bologna and others like the University of Paris (1150) focused on legal studies, arts, medicine, and theology. In these institutions, you were either learning about laws, figuring out what makes people tick, or studying the mysteries of the universe. Instruction was lecture-based and Latin was the language of scholarship.

By the Renaissance, things started changing. People started digging into old texts, challenging ideas, and inventing things. The liberal arts also came back—the original “well-rounded education.” Scholars started experimenting and using empirical evidence, basically, “let’s test if this works rather than just assume it’s true.” It was the dawn of modern science, and universities were at the heart of it all.

American Beginnings

Fast forward to America (we’re moving fast). Our colleges have been around since the colonial era, with Harvard being the first, founded in 1636 to train clergy. Others like William & Mary and Yale followed soon after. These schools focused on a broad education—what’s now sometimes called the “liberal arts”—covering a bit of everything. It’s why today you have to take those general education classes even if you’re an engineering major.

In the 1800s, as America expanded, we needed more colleges, and we needed them fast. Enter the Morrill Land Grant Acts of 1862 and 1890, which gave federal land to states to start new colleges. These schools focused on agriculture, engineering, and military science, trades and fields that were practical and needed for a growing country. This is where major public universities like Michigan State and Texas A&M got their start.

The 20th Century and Beyond

World War II spurred higher education in new ways. The GI Bill let veterans go to college and suddenly higher education wasn't just for the elite. By 1950, there were over 1,800 colleges and nearly 2.7 million students. Financial aid programs kept expanding, and more and more people had the chance to go to college. The emphasis on higher education today as a prerequisite for many jobs is a post-WWII phenomenon.

Here in Idaho, we have places like Boise State University and the University of Idaho, public institutions funded by state taxes, which means more affordable tuition for residents. Non-profit private schools like Northwest Nazarene University and the College of Idaho are also options if you want smaller classes or a faith-based experience. Then there's the for-profit sector—schools like the University of Phoenix—which focus on getting students ready for specific careers.

At the community college level, schools like the College of Western Idaho (CWI) offer affordable tuition and technical training. These places are all about getting you the skills you need, whether it's to go straight into a job or transfer to a four-year university.

What's Next?

Today, the higher education system is massive, with almost 4,000 colleges and about 16 million students. But it's not perfect: tuition is rising, student debt is a problem, and only about 60% of students finish their degrees within six years. So, yes, there are challenges. But despite the issues, American higher education remains dynamic and diverse.

Whether you're looking to dive into science, explore art, or get hands-on training for a job, there's a place for you.

29. Student Advising at CWI

Navigating college can be a complex and sometimes overwhelming experience, especially for new students. At CWI, we understand the challenges you may face and are committed to providing you with the support and guidance you need to succeed. One of the key resources available to you is our Academic Advising program.

Every degree-seeking student is assigned a dedicated Academic Advisor based on their declared major. These knowledgeable professionals are here to help you explore your career and educational goals, create a personalized academic plan, and navigate the various aspects of your college experience. They are your partners in success, and we encourage you to take advantage of their expertise and support.

The Role of Your Academic Advisor

1. **Class and Degree Planning:** One of the primary roles of your Academic Advisor is to help you plan your classes and create a roadmap for achieving your academic goals. They will work with you to develop a personalized plan that takes into account your interests, strengths, and any specific requirements of your chosen program. This plan will help you stay on track, avoid unnecessary courses, and ensure that you're taking classes in the optimal sequence for your degree.
2. **Transfer Support:** If your goal is to transfer to another institution after completing your studies at CWI, your advisor can provide invaluable assistance. They can help you research potential transfer schools, understand transfer requirements, and navigate the process of sending transcripts and other necessary documents. Whether you have a quick question or need more in-depth guidance, your advisor is here to help

demystify the transfer process.

3. **Student Success Strategies and Resources:** College life can present various challenges, from managing your time effectively to navigating online courses. Your Academic Advisor is a wealth of knowledge when it comes to student success strategies and can provide you with tips, techniques, and resources to help you thrive. They can also connect you with additional support services on campus, making them an excellent first point of contact for any questions or concerns you may have.
4. **How often you should meet with your advisor:** At CWI, we believe in the importance of regular communication between students and their advisors. As a degree-seeking student, you are required to meet with your advisor during your first semester, before registering for your second semester. This initial meeting is an opportunity to co-create your academic plan, discuss any challenges or successes you've experienced, and ensure that you're on the right path to achieving your goals. Beyond this mandatory first meeting, we recommend connecting with your advisor at least once per semester. These check-ins allow you to review your progress, make any necessary adjustments to your plan, and discuss your next steps. You should also reach out to your advisor anytime you need to make changes to your plan, are experiencing difficulties in your classes, or have questions about your future beyond CWI.

Connecting with Your Advisor

Now that you understand the valuable role your Academic Advisor plays in your success, let's explore how you can connect with them.

Finding Your Assigned Advisor: [Locate your assigned advisor in Student Planning](#) prior to scheduling an appointment. For a step-

by-step guide on finding your assigned advisor, visit [this walkthrough](#) or check out [this short video](#).

Once you have identified your advisor, visit the [Advisors page](#) on the CWI website. Here, you'll find a list of advisors, along with their contact information, advising specialties, and a personalized link to schedule an appointment.

If you're a non-degree-seeking or dual credit student, you may not have an assigned advisor. However, you can still request one by emailing academicadvising@cw.edu with your career goals, and you'll be connected with an advisor in your area of interest.

Scheduling an Appointment: Once you've located your advisor, you can easily schedule an appointment using their personalized [youcanbook.me](#) link, found on the Student Success Advisors page. Simply click on the link, choose an available date and time that works for you, and fill out the necessary information. Your advisor will then confirm your appointment and provide any additional details you may need.

PART VII

CAREER EXPLORATION

30. Networking

LUMEN LEARNING AND LINDA (BRUCE) HILL

*“Communication—the human connection—is
the key to personal and career success.”*

– Paul J. Meyer

In the context of career development, networking is the process by which people build relationships with one another for the purpose of helping one another achieve professional goals.

When you “network,” you exchange information.

- You may share business cards, résumés, cover letters, job-seeking strategies, leads about open jobs, information about companies and organizations, and information about a specific field.
- You might also share information about meet-up groups, conferences, special events, technology tools, and social media.
- You might also solicit job “headhunters,” career counselors, career centers, career coaches, an alumni association, family members, friends, acquaintances, and vendors.

Networking can occur anywhere and at any time. In fact, your network expands with each new relationship you establish. And the networking strategies you can employ are nearly limitless. With

imagination and ingenuity, your networking can be highly successful.



A series of stick figures connected by dotted lines.

Strategies for Networking

We live in a social world. Almost everywhere you go and anything you do professionally involves connecting with people. It stands to reason that finding a new job and advancing your career entails building relationships with these people. Truly, the most effective way to find a new job is to network, network, and network some more.

Once you acknowledge the value of networking, the challenge is figuring out how to do it. What is your first step? Whom do you contact? What do you say? How long will it take? Where do you concentrate efforts? How do you know if your investments will pay off?

For every question you may ask, a range of strategies can be used. Begin exploring your possibilities by viewing the following

energizing video, *Networking Tips for College Students and Young People*, by Hank Blank. He recommends the following modern and no-nonsense strategies:

1. Hope is not a plan. You need a plan of action to achieve your networking goals.
2. Keenly focus your activities on getting a job. Use all tools available to you.
3. You need business cards. No ifs, ands, or buts.
4. Attend networking events. Most of them offer student rates.
5. Master LinkedIn because that is what human resource departments use. Post updates.
6. Think of your parents' friends as databases. Leverage their knowledge and their willingness to help you.
7. Create the world you want to live in in the future by creating it today through your networking activity. These are the times to live in a world of "this is how I can help."

Video: *Networking Tips for College Students and Young People*, Hank Blank



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here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=30#oembed-1>

International Student Series: Finding Work Using Your Networks

If you are an international student, or perhaps if English is not your native language, this video may especially appeal to you. It focuses on the importance of networking when looking for jobs and keeping an open mind. Simply talking to people can help you move from casual work to full-time employment.

Video: International Student Series: Finding Work Using Your Networks



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here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=30#oembed-2>

... And More Strategies

Strategies at College

- **Get to know your professors:** Communicating with instructors is a valuable way to learn about a career and also get letters of reference if and when needed for a job. Professors can also give you leads on job openings, internships, and research possibilities. Most instructors will readily share information

and insights with you. Get to know your instructors. They are a valuable part of your network.

- **Check with your college's alumni office:** You may find that some alumni are affiliated with your field of interest and can give you the “inside scoop.”
- **Check with classmates:** Classmates may or may not share your major, but any of them may have leads that could help you. You could be just one conversation away from a good lead.

Strategies at Work

- **Join professional organizations:** You can meet many influential people at local and national meetings and events of professional and volunteer organizations. Learn about these organizations. See if they have membership discounts for students, or student chapters. Once you are a member, you may have access to membership lists, which can give you prospective access to many new people to network with.
- **Volunteer:** Volunteering is an excellent way to meet new people who can help you develop your career, even if the organization you are volunteering with is not in your field. Just by working alongside others and working toward common goals, you build relationships that may later serve you in unforeseen and helpful ways.
- **Get an internship:** Many organizations offer internship positions to college students. Some of these positions are paid, but often they are not. Paid or not, you gain experience relevant to your career, and you potentially make many new contacts. Check CollegeRecruiter.com and internships.com for key resources.
- **Get a part-time job:** Working full-time may be your ultimate goal, but you may want to fill in some cracks or crevices by working in a part-time job. Invariably you will meet people who can feasibly help with your networking goals. And you can gain

good experience along the way, which can also be noted on your résumé. Check your college career center website. Many have online job boards for full and part-time employment.

- **Join a job club:** Your career interests may be shared by many others who have organized a club, which can be online or in person. If you don't find an existing club, consider starting one.
- **Attend networking events:** There are innumerable professional networking events taking place around the world and also online. Find them listed in magazines, community calendars, newspapers, journals, and at the websites of companies, organizations, and associations.
- **Conduct informational interviews:** You may initiate contact with people in your chosen field who can tell you about their experiences of entering the field and thriving in it. Many websites have guidance on how to plan and conduct these interviews.

Strategies at Home and Beyond

- **Participate in online social media:** An explosion of career opportunity awaits you with social media, including LinkedIn, Twitter, Facebook, Instagram, Pinterest, and many more. You will find an [extensive list of suggested sites at CareerOneStop](#). Keep your communication ultra-professional at these sites. Peruse magazine articles, and if you find one that's relevant to your field and it contains names of professionals, you can reach out to them to learn more and get job leads. Realize that social media is public and posting pictures of yourself at parties or commenting in an unbecoming way could cost you an opportunity.
- **Ask family members and friends, coworkers, and acquaintances for referrals:** Do they know others who might help you? You can start with the question "Who else should I be talking to?"

- **Use business cards or networking cards:** A printed business card can be an essential tool to help your contacts remember you. Creativity can help in this regard, too. Students often design cards themselves and either hand print them or print them on a home printer.

Activity: Networking for Career Development

Objectives

- Examine five strategies for obtaining and engaging with networking contacts
- Develop relationships with new contacts to enhance your career

Instructions

- Find information about five companies or people in your field of interest and follow them on Twitter.
- Research which social media platform is popular in your field of interest currently interested in, and find leaders and experts in that field who are good models for how to interact with the audience of that platform. Be thoughtful about creating an account. Remember that these accounts will be highly searchable for a long time. What you post and how and when you post matters. That may enhance (or hurt) your career.
- Find names of three people who interest you (peruse magazine articles, online sites, or other resources), and write an email to them explaining your interests and any requests you may have for information.
- Sign up for newsletters from two professional organizations in

a field you want to know more about.

- Find and attend one in-person or online event within a month.
- Now write about this experience on one of your social media sites.
- Keep your communication on social media positive. It's poor form to attack or bully someone and may have regretful consequences. If you disagree with someone, do so respectfully.

For additional ideas and inspiration about networking for career development, watch the following video, *Hustle 101: Networking For College Students and Recent Grads*. The speaker, Emily Miethner, is a recent college graduate and the founder and president of NYCreative Interns, “dedicated to helping young creatives discover and then follow their dream careers.”

Video: *Hustle 101: Networking for College Students and Recent Grads*, Emily Miethner



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here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=30#oembed-3>

Sources for Developing Professional Networks

The bottom line with developing professional networks is to cull

information from as many sources as possible and use that information in creative ways to advance your career opportunities. The strategies listed in the section above provide you with a comprehensive set of suggestions. Below is a summary of sources you can use to network your way to career success:

- Meet-up groups
- Conferences
- Special events
- Technology tools
- Social media
- Career centers
- Alumni associations
- Professional organizations
- Volunteer organizations
- Internships
- Part-time job
- Job club
- Networking events
- Magazine articles
- Websites
- Career coaches
- Headhunters
- Career counselors
- Family members
- Friends
- Coworkers
- Vendors
- College professors
- Advisers
- Classmates
- Administrators
- Coaches
- Guest speakers

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Adaptions: Relocated learning objectives. Removed career fair image.

31. Resume and Cover Letters

Graciela Martinez and Elizabeth Shaker

The Cover Letter

A cover letter is a professional business letter that accompanies your resume and introduces yourself to the employer. It states the position you are applying for and your interest in the job and the company. It is designed to hook the reader and spark their interest in reading your resume.

Your cover letter should be engaging, informative, and show your command of the written word. It should flow easily from a reader's perspective, making the connection between the opportunity and your ability to succeed if given the chance. The tone should be compelling. You should be excited about the opportunity and you should be confident of your ability to succeed (even if you truly lack the confidence).

The format of your cover letter should involve three basic parts:

- The Introduction: The introductory paragraph, states the position you are applying for, how you heard about it, and why you are interested in the position. If someone referred you for the position, mention their name. The goal is to hook the employer and motivate them to want to review your resume and invite you for an interview!
- The Body: Paragraphs 2-3 give actual examples of your success in areas that support what the employer is looking for in the position. This is where you link your skills and abilities with the job description.
- The Closing: the final paragraph shows enthusiasm for working for the company. Request an interview to further discuss the

position and state that you will call within a week to follow-up. Thank the employer for their time and consideration.

The body of the cover letter is the most important part. To help you craft a strong body, it is important to match your qualifications with those the employer is looking for. To help you do this, you will need to study the job description in great detail. Extract the main functions, tasks, and desired qualifications from the job description and give examples from your past work experience to illustrate how you are a good fit.

With each résumé you send out, always include a cover letter specifically addressing your purposes.

Characteristics of an Effective Cover Letter

Cover letters should accomplish the following:

- Get the attention of the prospective employer
- Set you apart from any possible competition
- Identify the position you are interested in
- Specify how you learned about the position or company
- Present highlights of your skills and accomplishments
- Reflect your genuine interest
- Please the eye and ear

The following video features Aimee Bateman, founder of Careercake.com, who explains how you can create an incredible cover letter. You can download a transcript of the video [here](#).



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here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=32#oembed-1>

Table 31.1 – Cover Letter Resources

Website	Description
Student Cover Letter Samples (from About Careers)	This site contains sample student/recent graduate cover letters (especially for high school students and college students and graduates seeking employment) as well as cover letter templates, writing tips, formats and templates, email cover letter examples, and examples by type of applicant
How to Write Cover Letters (from CollegeGrad)	This site contains resources about the reality of cover letters, using a cover letter, the worst use of the cover letter, the testimonial cover letter technique, and a cover letter checklist
LinkedIn Cover Letter	This site contains articles, experts, jobs, and more: get all the professional insights you need on LinkedIn
Cover Letters (from the Yale Office of Career Strategy)	This site includes specifications for the cover letter framework (introductory paragraph, middle paragraph, concluding paragraph), as well as format and style
COC Career Center	The Career Center provides assistance with career counseling, internship assistance and the job search process. Meet with an expert for professional feedback on your resume.

Sample Cover Letter Template

Today's date

June 13, 2013

Your contact information

Joe Smith
12345 Valencia Blvd
Valencia, CA 91355
Jsmith@msn.com

Company contact information
Tips: If you only have the company name, Google the company to find their full address. If you have a contact name, put it right above the company name. If the company is unknown, just skip this block of information.

Microsoft Industries
8888 W. Magic Mountain Parkway
Valencia, CA 91355
(888) 888-8888

Greeting: *If the job description mentions the name of the person you will be sending your resume to, put Dear Mr./Ms. (last name). If you don't have a name, try calling the company to find out who will be hiring for the position you're interested in. If you still don't have a name, use Dear Hiring Manager.*

Dear Hiring Manager,

I am interested in the Receptionist position that you are currently seeking to fill. I saw this position advertised in the MyJobs database through College of the Canyons and feel that my background and experience make me a qualified candidate for this position.

Paragraph 1
Name the position being applied for. Mention where you heard about it or saw it and/or why you are applying.

My experience includes over five years of providing customer service to diverse clientele in a variety of work environments. At Integrated Support Solutions Inc., I was given the responsibility of managing payroll and inputting inventory information into the computer system. As a College Assistant at College of the Canyons I made outgoing calls, kept detailed records, and scheduled appointments. I am computer proficient in Microsoft Word, Excel, and PowerPoint and can operate a variety of office equipment. Personal strengths include excellent verbal and written communication skills (bilingual in English/Spanish), independent working habits, customer service skills, and punctuality. I am currently attending College of the Canyons and expect to receive my associate's degree in Business Administration in June of 2014.

Paragraph 2
The most important section: Address the job description by mentioning:
- Relevant work/skills required for the job
- Relevant strengths
- Relevant education and/or training.

Based on my professional skills and experience, I feel confident that given the opportunity, I can immediately contribute to the continuing success of your business. I would appreciate the opportunity to further discuss this position and my qualifications at your convenience. I can be reached at (661) 888-8888. Thank you for your consideration.

Paragraph 3
Show enthusiasm, provide your contact phone number and request an interview.

Sincerely,

Joe Smith

Enc. Resume

Activity 31.1: Creating My Cover Letter

Now that we have reviewed the importance of a cover letter, it is time for you to develop your cover letter. Find a job or internship announcement you would be interested in applying for and craft your cover letter for this particular job/internship opportunity.

Make your cover letter personal and specific to the job/internship announcement and make sure it hooks the employer

Use the cover letter tools listed in the Cover Letter Resources table above to help you create your cover letter. Save your document as a PDF file.

Follow instructions from your instructor on how to submit your work.

Developing a Strong Resume

Marketing Focus

Your resume is a marketing document that sells your candidacy. It provides an outline of your educational background, your work experience, and the key skills you have acquired. Your resume should be marketed in a format that is pleasing to read, efficient in its use of the English language, and so concise that it fits on one page. Once you have approximately ten years of experience, it is more acceptable to have a two-page resume, but until then, you should adhere to a one-page document. Recruiters can frown on the audacity of a college student with a two-page resume. Whether you are not sure you can fill a one-page resume, or whether you think it's not possible to fit your information to only one page, this section will help you get to your goal: an exceptional, one-page resume.

The following video is an animated look at why résumés are so important. You can read a transcript of the video [here](#).³⁸



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here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=32#oembed-2>

Quality, Clarity, and Accuracy

Your resume is the most critical component, or cornerstone, of your marketing campaign and it must meet two important criteria:

- Your resume must be written in a clear and concise manner so the reader can quickly grasp what you offer as a candidate. Most seasoned recruiters scan a resume in about seven to ten seconds, but do not let that short review time throw you. Recruiters have an eye for the key things to look for in a resume, so a lot of care should be put into its construction. That construction should highlight the following features:
 - Your strengths
 - Your responsibilities
 - Your accomplishments
- Your resume must be completely error-free. A resume represents you when you are not there. Recruiters look for reasons to reduce the number of resumes to review, so one error can be all that is needed to discard your resume and your candidacy. This is true in both good and bad economies, so take great care to guarantee 100 percent accuracy. Proofread your resume several times, use spell check, and ask someone who is exceptional at proofreading to review it. Always assume that an error lurks somewhere in your resume and review it and review it and review it until you find that error! Resumes often have the following common errors:
 - Misspellings (Spell check does not catch every misspelled word; meat will not be corrected if you meant to write meet.)

- Errors in verb tense (Past experiences should be written in the past tense and current experiences in the current tense.)
- Grammatical errors of any kind
- Inconsistent formatting
- Inappropriate length

How to Craft the Perfect Resume

This is a trick title because there is no perfect resume. You could always choose to have a particular bullet point written in ways that are grammatically correct, are results oriented, and use action verbs, but writing a resume is not a perfect science. You could show your resume to five different recruiters and you might get five different opinions. There is no need to worry. The important thing is that it is well-written and highlights your accomplishments (no matter how big or how not so big). It's important that the format be consistent and that you get an opinion from a professional, whether it is someone from career services, a professor, or a person who is currently working in the field in which you are most interested.

A well-written resume can do seven specific things for you and your job search:

It Represents You When You Are Not There

Your resume can be uploaded to global job boards like Monster, CareerBuilder, and others in a few minutes. It can be sent to a company's online database with a push of a button. It can then be shared with dozens of recruiters and hiring managers without you even knowing about it. In fact, it's a lot easier to get your resume in front of a recruiter than it is to have a physical presence in their office; therefore, make certain it's a well-written, well-positioned document that makes an exceptional first impression.

It Quantifies Your Accomplishments

The best resume quantifies results and accomplishments clearly and easily. Here are some examples:

- If you reduced errors by 35 percent, if you increased profits by 55 percent, and if 75 percent of your customers are repeat customers, include this information clearly, succinctly, and proudly.
- If you have been a student teacher with thirty-five students in a classroom and student grades improved by 25 percent, include that as well.
- If you have worked as an administrative assistant in a dentist's office and you are part of a marketing team that has increased new patient accounts by 10 percent last quarter, include that!
- If you worked in the school library and the number of lost books has declined by 50 percent, or if you provide guidance to approximately fifty students per day, that information should be in your resume.

Quantifying your accomplishments gives your resume readers the specific information they need to know about your abilities and to be intrigued by what you can do for them.

It Clearly States Your Abilities

Focus on the results of your actions. Being results oriented helps resume readers understand your abilities. What exactly do you do, or what have you done in the past? Your resume should answer this question very quickly. For example, if you have been responsible for opening and closing a retail store on a daily basis and for managing the register that took in approximately \$5,000 worth of merchandise a day, state that clearly and concisely. If you have

written three to four sports articles for your school paper every month for the past three years, include that as well.

The more you quantify your accomplishments, the more your abilities will be understood.

It Shows Your Command of the Written Word

You don't have to be an English major to make sure that your resume is well written. Visit the career services department and inquire about resume writing workshops. Be sure to participate in them and consider scheduling a 1:1 appointment with a career counselor for additional support with your resume. Ask an older sibling who is in the workplace to review your resume before it goes into cyberspace or to a future employer. Other options include asking a teacher, professor, or perhaps someone with whom you worked with or for in the past to review your resume. Whatever the case, it is your responsibility to have a well-written resume. Remember that if it has one misspelled word, your resume could easily be dismissed, along with your candidacy. It's critical that your resume be accurate and well written.

It Creates Talking Points for Your Future Interviews

Clearly listing your accomplishments and quantifying those accomplishments can create talking points for your future interviews. For example, perhaps your bullet point is the following:

- Responsible for the intake and outtake of approximately 1,000 books daily, ensuring that all library users are logged into the new electronic database, which has decreased the number of lost books by 80 percent in the past year.

Many individuals have to think about the results of their work.

Including this detailed information in your resume actually allows you to easily talk about the value you've brought to previous employers. During an interview, with the preceding example in mind, you can easily talk about how you use technology to improve processes. You can discuss the team environment of the library staff and how you are all working toward decreasing the number of lost books. It shows that you have positively affected the bottom line by helping libraries hold onto books versus losing them, which results in unnecessary fees to library users.

It Proves Your Worth to Your Past Employers

Whenever including bullet points about past work, always tie your efforts to the bottom line. Earlier examples in this Unit included the following accomplishments:

- Reducing errors by 35 percent
- Increasing profits by 55 percent
- Boosting repeat sales to 75 percent

Information relating to a company's bottom line is exactly what employers want to read. Highlighting results like these increases your chances of having your resume noticed.

It Demonstrates What You Can Do for Your Future Employer

Unlike financial investments, past performance is an indicator of future success, so include and quantify your past performance, and future employers will be inclined to believe you can do the same for them. They will believe it, but you have to continue supporting that belief with your exceptional networking and interviewing skills. Interviewing skills will be addressed later in this Unit. Remember, however, that your resume is introductory in nature. You want to

get their attention and initiate their interest so your foot can inch ever closer to getting in their door. Resume Format

Perhaps the hardest part of writing a résumé is figuring out what format to use to organize and present your information in the most effective way. There is no correct format, per se, but most résumés follow one of the four formats below. Which format appeals to you the most?

- **Reverse chronological résumé:** A reverse chronological résumé (sometimes also simply called a chronological résumé) lists your job experiences in reverse chronological order—that is, starting with the most recent job and working backward toward your first job. It includes starting and ending dates. Also included is a brief description of the work duties you performed for each job, and highlights of your formal education. The reverse chronological résumé may be the most common and perhaps the most conservative résumé format. It is most suitable for demonstrating a solid work history, and growth and development in your skills. It may not suit you if you are light on skills in the area you are applying to, or if you've changed employers frequently, or if you are looking for your first job.
- **Functional résumé:** A functional résumé is organized around your talents, skills, and abilities (more so than work duties and job titles, as with the reverse chronological résumé). It emphasizes specific professional capabilities, like what you have done or what you can do. Specific dates may be included but are not as important. So if you are a new graduate entering your field with little or no actual work experience, the functional résumé may be a good format for you. It can also be useful when you are seeking work in a field that differs from what you have done in the past. It's also well suited for people in unconventional careers.
- **Hybrid résumé:** The hybrid résumé is a format reflecting both the functional and chronological approaches. It's also called a

combination résumé. It highlights relevant skills, but it still provides information about your work experience. With a hybrid résumé, you may list your job skills as most prominent and then follow with a chronological (or reverse chronological) list of employers. This résumé format is most effective when your specific skills and job experience need to be emphasized. [Hybrid Résumé Examples](#)

- Video, infographic, and Web-site résumé: Other formats you may wish to consider are the video résumé, the infographic résumé, or even a Web-site résumé. These formats may be most suitable for people in multimedia and creative careers. Certainly with the expansive use of technology today, a job seeker might at least try to create a media-enhanced résumé. But the paper-based, traditional résumé is by far the most commonly used—in fact, some human resource departments may not permit submission of any format other than paper based. [Video Resume Examples](#); [Infographic Résumé Examples](#); [Web-Site Résumé Examples](#)

An important note about formatting is that, initially, employers may spend only a few seconds reviewing each résumé—especially if there is a big stack of them or they seem tedious to read. That's why it's important to choose your format carefully so it will stand out and make the first cut.

Résumé Contents and Structure

For many people, the process of writing a résumé is daunting. After all, you are taking a lot of information and condensing it into a very concise form that needs to be both eye-catching and easy to read. Don't be scared off, though! Developing a good résumé can be fun, rewarding, and easier than you think if you follow a few basic guidelines. In the following video, a résumé-writing expert describes some keys to success.

Contents and Components to Include

- Your contact information: full name (avoid nicknames), address, phone number, professional email address
- **Objective:** a brief statement sharing what you are looking for and what you have to contribute
- A summary of your skills: 5–10 skills you have gained in your field; you can list hard skills as well as soft skills (refer to the Professional Skill Building topic in this course)
- Work experience: depending on the résumé format you choose, you may list your most recent job first; include the title of the position, employer's name, location, employment dates (beginning, ending). Use brief bullet point statements to list your responsibilities and achievements. Use action words to start each bullet point. Refer Table1 below.
- **Volunteer experience:**
- Education and training: formal and informal experiences matter; include academic degrees, professional development, certificates, internships, study abroad, etc.
- References statement (optional): “References available upon request” is a standard phrase used at the end of résumés or you may take a proactive approach and create a separate document that lists your references. See sample below
- Other sections: may include, a branding statement, a summary statement, additional accomplishments, and any other related experiences such as: Computer Skills, Language Skills, Extracurricular Activities or Honors and Awards

Caution

Résumés resemble snowflakes in as much as no two are alike. Although you can benefit from giving yours a stamp of individuality, you will do well to steer clear of personal details that might elicit a negative response. It is advisable to omit any confidential

information or details that could make you vulnerable to discrimination, for instance. Your résumé will likely be viewed by a number of employees in an organization, including human resource personnel, managers, administrative staff, etc. By aiming to please all reviewers, you gain maximum advantage.

- Do not mention your age, gender, height or weight.
- Do not include your social security number.
- Do not mention religious beliefs or political affiliations, unless they are relevant to the position.
- Do not include a photograph of yourself or a physical description.
- Do not mention health issues.
- Do not use first-person references. (I, me).
- Do not include wage/salary expectations.
- Do not use abbreviations.
- Proofread carefully—absolutely no spelling mistakes are acceptable.

Top Ten Tips for a Successful Résumé

- Aim to make a résumé that's 1-2 pages long on letter-size paper.
- Make it visually appealing.
- Use action verbs and phrases. See Table 1 below for a list of action verbs.
- Proofread carefully to eliminate any spelling, grammar, punctuation, and typographical errors.
- Include highlights of your qualifications or skills to attract an employer's attention.
- Craft your cover letter as a pitch to people in the profession you plan to work in (more on cover letters in the next section)
- Stand out as different, courageous.
- Be positive and reflect only the truth.

- Be excited and optimistic about your job prospects!
- Keep refining and reworking your résumé; it's an ongoing project.

Remember that your résumé is your professional profile. It will hold you in the most professional and positive light, and it's designed to be a quick and easy way for a prospective employer to evaluate what you might bring to a job. When written and formatted attractively, creatively, and legibly, your résumé is what will get your foot in the door. You can be proud of your accomplishments, even if they don't seem numerous. Let your résumé reflect your personal pride and professionalism.

In the following video, “Résumé Tips for College Students From Employers,” several college graduate recruiters summarize the most important points about crafting your résumé.³⁹

You can download a transcript of the video [here](#).



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=32#oembed-3>

Table 31.2 – [Action Words](#)

accelerated	expanded		
accomplished	expedited	launched	regulated
achieved	extracted	maintained	related
acquired	fabricated	managed	remodeled
administered	facilitated	marketed	reorganized
advised	formulated	mediate	repaired
analyzed	founded	minimized	represented
appointed	generated	monitored	researched
approved	headed	motivated	resolved
arranged	helped	negotiated	restored
assisted	hired	obtained	restructured
assembled	identified	operated	retrieved
audited	illustrated	organized	reviewed
attained	implemented	originated	revised
delegated	improved	overhauled	scheduled
demonstrated	increased	oversaw	shaped
designed	headed	participated	solved
determined	helped	performed	sorted
developed	hired	persuaded	spoke
devised	identified	planned	streamlined
directed	illustrated	prepared	summarized
distributed	implemented	presented	supervised
drafted	improved	prioritized	tabulated
edited	increased	processed	taught
educated	initiated	produced	trained
eliminated	innovated	programmed	translated
encouraged	inspected	promoted	trimmed
enhanced	installed	proposed	upgraded
enlarged	instructed	provided	utilized
established	integrated	published	validated
evaluated	interpreted	recorded	worked
examined	interviewed	recruited	wrote
exceeded	investigated		
executed			

On the next few pages are samples to reference to help you prepare your resume. The resume examples are from College of the Canyons' [Job Search Information & Templates](#) page.

Sample Reverse Chronological Resume Template

Layout: No smaller than 11pt in Times New Roman or Arial font. Margins no smaller than 0.5 inches all around. Resume can be two pages if your information is relevant to the job and takes up at least 1/3 of the 2nd page.

FIRST & LAST NAME

City, State Zip Code
(555) 555-5555
email@email.com

OBJECTIVE: Insert a “hook” statement with the job you are applying for as well as a summary of why the prospective employer should choose you as a candidate

HIGHLIGHTS OF QUALIFICATIONS

- Number of years of experience in the corresponding industry
- Insert a statement about tasks you have experience with that are relevant to the job (Ex/ “Expert at designing and implementing social media campaigns via Instagram and Facebook”)
- Insert a statement about technical skill sets you possess (Ex/ Microsoft Office Excel, Adobe Photoshop)
- Insert a statement about soft skill sets you possess (Ex/ Customer service, *acting as a liaison between* ABC and DFG departments)
- Insert a statement about multi-lingual abilities if applicable

Tailor this section to each job description! Use key buzzwords from the job description that are applicable to you. Ask yourself, “What would you want to see if you were hiring for this job opportunity?”

PROFESSIONAL EXPERIENCE

COMPANY NAME, CITY, STATE

DD/YY- DD/YY

Job Title

- (What was the problem? What was your solution? What results were seen as a consequence of your actions? Did the result correspond with an increase in sales, productivity, efficiency, or any other achievement?)
- (Did you establish any new systems or changes?)
- (Did you help to establish new goals or objectives for your company?)
- (Did you undertake a project that was not part of your original responsibility because you wanted to solve the problem?)
- (Did you improve any particular aspect of your job, your department or your employer?)

In each of the above bulleted statements, follow the formula: **POWERFUL ACTION VERB + JOB TASK(S) = RESULT**

COMPANY NAME, CITY, STATE

DD/YY- DD/YY

Job Title

- **Powerful action verb** + **description of job task(s)** = **quantitative or qualitative result of job task(s)**
- **Powerful action verb** + **description of job task(s)** = **quantitative or qualitative result of job task(s)**
- **Powerful action verb** + **description of job task(s)** = **quantitative or qualitative result of job task(s)**
- **Powerful action verb** + **description of job task(s)** = **quantitative or qualitative result of job task(s)**

For past jobs, use past tense verbs.

COMPANY NAME, CITY, STATE

DD/YY- DD/YY

Job Title

- **Powerful action verb** + **description of job task(s)** = **quantitative or qualitative result of job task(s)**
- **Powerful action verb** + **description of job task(s)** = **quantitative or qualitative result of job task(s)**
- **Powerful action verb** + **description of job task(s)** = **quantitative or qualitative result of job task(s)**

EDUCATION

NAME OF COLLEGE

Title of degree

If you have a college degree, including high school is unnecessary.
If you have attended more than 10 years ago, leave dates off.

Expected: DD/YY

NOTE: Typically, work history should cover the past 10-15 years with dates. For relevant experience prior to that, start a new section titled “OTHER RELEVANT EXPERIENCE” and continue in the same format without the dates.

Sample Reverse Chronological Resume

Jane Doe
23450 Any Street Road
Valencia, CA 91355
(661) 555-5555
JaneDoe2000@earthlink.net

OBJECTIVE: To obtain a position as a Clerical Assistant at College of the Canyons

HIGHLIGHTS OF QUALIFICATIONS

- Over two years of professional experience performing clerical duties
- Office experience includes typing (50wpm), filing, creating reports, answering phones, scheduling appointments, mailings and database management
- Computer proficient in both Mac and PC platforms, with experience using Microsoft Word, Excel, Access, PowerPoint, and the internet for online research
- Excellent verbal and written communication skills; Bilingual in English and Spanish
- Highly organized, with a proven ability to manage multiple tasks in fast-paced work environments
- Equally skilled working independently or as a member of a team

PROFESSIONAL EXPERIENCE

Microsoft Industries, Valencia, CA

06/12 – Present

Receptionist

- Type all office correspondence and documents and answer incoming calls on a multi-line phone
- Input statistical and confidential information into the computer database
- Operate and train staff on a variety of computer software programs and company procedures
- Utilize interpersonal skills when working with diverse professionals
- Verify the accuracy of new client files and records

Sears Department Store, Northridge, CA

04/10 – 05/12

Cashier

- Greeted customers entering the establishment and answered questions about merchandise
- Operated the cash register and received payments by cash, check, credit, debit, and gift cards
- Issued receipts, distributed change, processed returns, and handled exchanges
- Maintained a clean and orderly checkout area and completed other general cleaning duties

Publishing Today, Valencia, CA

01/09 – 03/10

Secretary

- Organized meetings, planned agendas and handled the scheduling of office events
- Input, filed, mailed, and faxed official documents
- Served as acting supervisor when director was out of office, working closely with colleagues and staff to ensure the smooth running of the office
- Interfaced with staff and business representatives on a regular basis

EDUCATION

California State University Northridge, Northridge, CA

Bachelor of Science Degree in Business Administration

Expected: 06/14

College of the Canyons, Valencia, CA

Associate of Arts Degree in Accounting

Received: 06/12

Sample Functional Resume Template

Your Name

Address, City, ST ZIP Code | Telephone | Email

Objective

To get started right away, just click any placeholder text (such as this) and start typing to replace it with your own.

Summary of Qualifications

- Describe how to meet each of the requirements for the job you want
- Leave no required qualification out
- Include other key skills you have that may add to your value in the position
- You may have 8-10 bullet points to cover this information adequately

Education

DEGREE | SCHOOL | DATE EARNED OR EXPECTED: DATE

- Major: Click here to enter text
- Minor: Click here to enter text
- Related coursework: Click here to enter text

Skills & Abilities

MANAGEMENT

- Customize each skill set to the skills you have and include only those skillsets relevant to the position you are currently seeking.

SALES

- Include examples of the success you have had using each skillset after a few bullet points describing your skills for each skillset.

COMMUNICATION

- You delivered that big presentation to rave reviews. Don't be shy about it now! This is the place to show how well you work and play with others.

LEADERSHIP

- Are you president of your fraternity, head of the condo board, or a team lead for your favorite charity? You're a natural leader—tell it like it is!

Work Experience

Job Title | Company | Dates From – To
Job Title | Company | Dates From – To
Job Title | Company | Dates From – To
Job Title | Company | Dates From – To

Sample Functional Resume

Roberta Hawley
333 West Terrace

Madison, WI 55555

E-mail: rh333@uwisconsin.edu

Cell: 917.333.5555

OBJECTIVE:

To secure an entry-level position in the health care industry, using my volunteer experience, along with my client focus, and results-oriented approach.

EDUCATION:

University of Wisconsin, Madison, WI

BS degree, expected Spring 2013

Major: health care, Minor: communications

GPA:3.8

HONORS:

- Health Care Award recipient, Wisconsin General Hospital 2011
- University of Wisconsin Student Government, elected junior class president, 2011
- Dean's List, 2010m 2011
- Senator Smith Scholarship for Academic Excellence, 2010
- Pi Kappa Delta
- Silver Helmer National Honor Society

LEADERSHIP SKILLS:

- President health care club, 2011, member 2008-2012
- Treasurer, nutrition club, 2010, member 2009-2012
- Captain, varsity tennis team, 2009-2012 and state singles champion, 2009

HEALTH CARE VOLUNTEER ACTIVITIES:

- Volunteer reader, Mercy General Hospital, 2007-Present
- Gift shop volunteer, Mercy General Hospital, 2009-Present

COMMUNITY VOLUNTEER ACTIVITIES:

- Fun Run, Memorial Half Marathon, 2009-Present
- Wisconsin Cares volunteers, Coat Collection Drive, 2010
- Tennis coach, Wisconsin Special Olympics, 2008-2010

COMPUTER SKILLS

- Microsoft Office Suite: Word, Excel, and PowerPoint
- Apple formats, Photoshop, and UNIX platforms
- LexisNexis and VISIO
- Programming skills C++

Sample Reference Page

References for Joe Cougar, 23450 Any Street Road Valencia, CA 91355(661) 555-5555 Email: Joecougar@earthlink.net:

Jane Jones Supervisor, JCrew Retail Store, May 2012 – August 2012
Phone: (661) 555-5555 Email: Janejones@jcrew.org

Sarah Canyons Professor, College of the Canyons, Spring 2016
Phone: (661) 755-5555 Email: Sarah.canyons@canyons.edu

Michael James Supervisor, Publisher Today, April 2013 – May 2014
Phone: (661) 855-5555 Email: Michael.james@publisher.com

As you develop your resume, be sure to have several people review it with you. The Career Center is a great resource on campus to help you with your resume. They have experts available to assist you in creating, critiquing, and drafting your resume.

Table 31.3 – Resume Writing Resources

Website	Description
The Online Resume Builder (from My Perfect resume)	The online résumé builder is easy to use. Choose your résumé design from the library of professional designs, insert prewritten examples, then download and print your new résumé.
Résumé Builder (from Live Career)	This site offers examples and samples, templates, tips, videos, and services for résumés, cover letters, interviews, and jobs.
Résumé Samples for College Students and Graduates (from About Careers)	This site offers a plethora of sample résumés for college students and graduates. Listings are by type of student and by type of job. Résumé templates are also provided.
JobSearch Minute Videos (from College Grad)	This site offers multiple to-the-point one-minute videos on topics such as print résumés, video résumés, cover letters, interviewing, tough interview questions, references, job fairs, and Internet job searching.
42 Résumé Dos and Don'ts Every Job Seeker Should Know (from the muse)	A comprehensive list of résumé dos and don'ts, which includes traditional rules as well as new rules to polish your résumé.
COC Career Center	The Career Center provides assistance with career counseling, internship assistance and the job search process. Meet with an expert for professional feedback on your resume.

Activity 31.2: Creating My Resume

Compile data reflecting your professional and educational skills and accomplishments. Assess the main résumé formats and select one that meets your needs, then create a first draft of your professional résumé.

Compile all needed information for your résumé, including your contact information, a summary of your skills, your work experience and volunteer experience, education and training (including your intended degree, professional development activities, certificates, internships, etc.). Optionally you may wish to include job objective, a brief profile, a branding statement, additional accomplishments, and any other related experiences.

Select one of the résumé builder tools listed above in the Résumé Writing Resources table.

Create your résumé, following instructions at your selected site.

Save your document as a PDF file.

Follow instructions from your instructor on how to submit your work.

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32. Pathways Plan A, B, and C

Where will you be in five years?

At the beginning of this book, we asked you to consider your personal “why” for college. Most students who choose to invest their time and resources in a college education do this because they think they will realize a return on their investment, perhaps in terms of a better career or higher wages.

But what effect will college have on your life? Will your college degree make you happier? What are your goals, dreams, and values? How will you make sure that your life means something?

In their popular book [Designing Your Life](#), Bill Burnett and Dave Evans apply the principles of design thinking to create not just one—but three—plans for success in career and life. They argue that creating a Plan A, an Plan B, and a Plan C will help you to achieve more clarity about what you really want from your life and better understand how college fits into your true desires.

In this video, Brenda Fisher, CWI’s Visual and Performing Arts Department Chair, explains more about Pathways plans and how they work.



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=146#oembed-1>

We have referenced Burnett and Evans’s ideas in our Pathways plans assignments. You will create three very different five-year plans for your life. For each plan, you will consider both career and life goals.

PATHWAYS PLAN A: DEFAULT

Default career: In terms of your career and employment situation, where would you like to be in five years? What's your default career goal? For example, do you intend to be a certified nurse in five years? Do you want to be a high school math teacher?

Personal goal: Aside from your educational/career goals, what aspect of your personal life would you like to work on over the next five years? For example, do you have a health goal? Would you like to travel more? Are there certain skills you'd like to develop?

PATHWAYS PLAN B: BACKUP

Backup career: If your default career goal (above) doesn't work out, what's the second-best option? What's your backup career? (tip: Look back at the Next Steps Idaho assignment)

Personal goal: Aside from your educational/career goals, what aspect of your personal life would you like to work on over the next five years? For example, do you have a health goal? Would you like to travel more? Are there certain skills you'd like to develop?

PATHWAYS PLAN C: FUN

Fun career: If money weren't a factor and you didn't need to consider what other people think about your decisions, what fun or completely out-of-the-box career option would you pursue?

Personal goal: Aside from your educational/career goals, what aspect of your personal life would you like to work on over the next five years? For example, do you have a health goal? Would you like to travel more? Are there certain skills you'd like to develop?

To see examples of what a completed plan looks like, you can try the Google image search: Odyssey Plans. Note that our worksheet is slightly different, and the directions for this Pathways

assignment may ask for things you don't see in some examples. Completing this activity will help you to connect your career goals to what really matters to you in life.

TEDx Talk: Bill Burnett, "5 Steps to designing the life you want"

The Five-Year Pathway Plan is inspired by the Odyssey Plans of Dave Evans and Bill Burnett. Here's an entertaining TEDx talk by Bill Burnett that may provide additional context.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=146#oembed-2>

33. Work-Based Learning Center at CWI

Moving from college to a career isn't always a direct path. The Work-Based Learning Center (WBLC) at CWI is here to help bridge the gap between what you learn in the classroom and your success in the workplace. Using a “learn, do, earn” approach, the WBLC brings students, faculty, and employers together to help you build a strong foundation for your future career.



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=387#oembed-1>

Three Pathways to Real-World Experience

The WBLC offers three main pathways to help you get hands-on experience, each meeting you wherever you are in your career journey.

Job Shadowing

Job shadowing is the perfect first step to explore a potential career field. By spending time with professionals in your chosen area, you'll get a firsthand look at what they do day-to-day, the challenges they face, and their successes. This experience can help

you either confirm that you're on the right track or decide to explore a different path—both are equally valuable discoveries!

Internships

Internships are all about diving deeper. As an intern, you'll take on real responsibilities, contribute to projects, and put what you've learned in class into practice. Many students find that internships not only help them build skills employers value but also boost their resumes with meaningful experiences. Sometimes, internships lead directly to job offers—but even if they don't, they're a great way to gain references and make connections for the future.

Apprenticeships

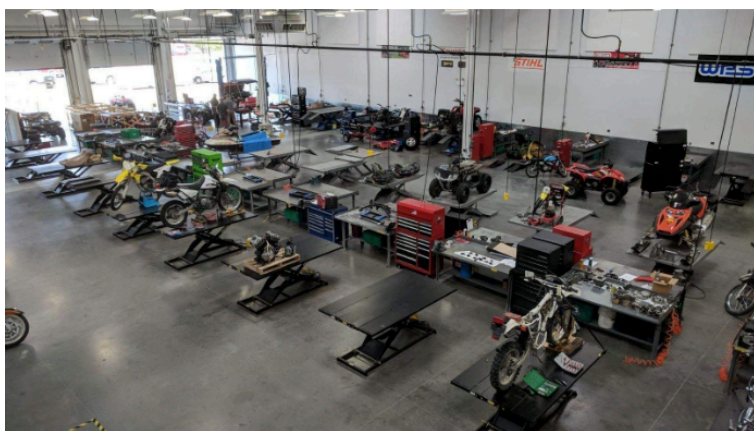
The apprenticeship pathway lets you “earn while you learn.” This structured program combines on-the-job training with classroom learning, giving you the chance to build skills that are in demand while getting paid. Apprenticeships are an ideal way to master both the practical and theoretical sides of a career, often leading straight into employment when the program is complete.

What We Do

Once you've decided where you'd like to start, let the WBLC assist you. We assist students as they start their journey toward achieving their educational and career goals. The WBLC can:

Connect students with employers: Employers in our community need employees. We connect students with those employers via Work-Based Learning Center opportunities.

Support students in developing meaningful, hands-on experiences: With the Work-Based Learning Center, education is more than learning in the classroom. Our programs provide you with opportunities to develop meaningful, hands-on learning experiences.



Assist students with applying for financial assistance (FAFSA): The [Free Application for Federal Student Aid or FAFSA](#) is the online form prospective or current college students complete to determine their eligibility for student financial aid. The Work-Based Learning Center helps students fill out and understand how the form benefits them financially, what is needed for the application, and how to understand the results of their application.



Ensure students get the credits they've earned: Knowing what's needed to receive credit for completed work can be confusing. The Work-Based Learning Center assists with the required paperwork to ensure students get the credit they've earned.



Handshake

The WBLC has partnered with [Handshake](#)—a career platform that helps you connect with job opportunities. Think of it as your personal career dashboard, where you can find work study positions at CWI, jobs, internships, and connect with employers. Here's how to get started.

Get the Job

Add your interests to your Handshake profile

Keeping the **Job Preferences** section of your profile up to date is the key to finding a job or internship on Handshake.



Job Type

Do you want an internship, part-time position, or full-time job? You can choose more than one, and we'll show you relevant opportunities for each type.



Location

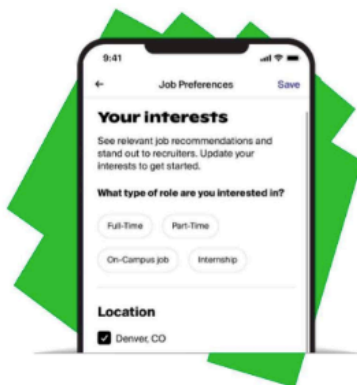
Which cities do you want to work in? Discover popular places for students interested in tech, arts, sports, and more on Handshake.



Job Roles

Tell us the types of jobs you want by selecting at least three roles you'd like to explore. We'll also suggest roles for your major.

[JOINHANDSHAKE.COM](https://joinhandshake.com)



Contact Work-Based Learning Center | 208.562.2562
wblc@cwidi.edu
cwidi.edu/work-based-learning-center



COLLEGE OF
WESTERN
IDAHO

Creating Your Profile: Start by creating a compelling Handshake profile. Use your CWI email to sign in and begin. This is your digital first impression for employers, so take time to highlight your skills, experiences, and what you're looking for in a career. Include your resume. You can set your profile to “private” if it's not complete.

Customizing Your Preferences: Handshake matches you with opportunities based on your interests. Want a part-time job while you're in school? Looking for a summer internship? Set your

preferences so the platform can help you find the right roles. The more specific you are, the better your matches will be.

Exploring Opportunities: Handshake isn't just a job board. Once you're set up, it will send you notifications about jobs, internships, career fairs, and networking events that fit your interests. You can also follow companies to stay updated on their latest opportunities.

Other WBLC Services

My Plan: Finding or Improving Your Career Path

[MyPlan](#) is a comprehensive set of tools and resources to help you make decisions and prepare for your future.

On-the-Job Training and Work Experience

An experience (e.g., apprenticeship) where a student receives one-on-one training from a supervisor/mentor at their chosen job site. The employer determines the skills/competencies needed and how they are measured. The individual is paid wages and receives the same benefits as any other employee doing similar work.

Potential to Earn Academic Credit

A short-term position (e.g., internship) providing experience and exposure. May be paid or unpaid and for credit or non-credit. The Work-Based Learning Center assists with paperwork to ensure students get credit. Additionally, students may or may not receive pay.

Potential to Earn Money

A paid or unpaid experience (e.g., internship) for a student or trainee. Working in an organization provides professional experience or may satisfy requirements for a qualification. Additionally, students may or may not receive secondary or postsecondary credit.

Build Employment Contacts

Students learn by directly engaging with potential future employers with the guidance of the Work-Based Learning Center

staff. These contacts may provide references or job opportunities in the future.

Resume Assistance

The Work-Based Learning Center staff assists students as they develop a resume that illustrates their strengths, create a cover letter that highlights any transferrable skills, gather strong references, and prepare and practice for interviews.

Contact

Contact Us for More Information

Email: wblc@cwj.edu (opens in a new tab)

Phone: (208) 562-2562

Location: 5500 E. Opportunity Dr., Suite 107, Nampa, ID 83687

PART VIII

HEALTH AND LIFESTYLE

34. Introduction to Health and Wellness

How do you feel about your overall health and well-being? These questions will help you determine how the chapter concepts relate to you right now. As we are introduced to new concepts and practices, it can be informative to reflect on how your understanding changes over time. Take this quick survey to figure it out, ranking questions on a scale of 1–4, 1 meaning “least like me” and 4 meaning “most like me.”

1. I can manage my emotions most of the time.
2. I can reduce stress when it is negatively affecting me.
3. I feel comfortable seeking out help when needed.
4. I get enough sleep.

You can also take this chapter’s [survey](#) anonymously online.

Student Profile

“My freshman year of college, I started at a pretty big university. I had what some call “social anxiety” and even cried before getting out of the car on my first day. That year was a struggle for me, and I constantly had to fight with myself to step out of my comfort zone in order to succeed. I knew that if I made positive changes to my life then I would easily succeed in school. I joined a group of students who were a support system for me during my first year of college. Together we studied

together and even worked out together. It helped me be more involved on my campus and less worried. Being connected with other students has taught me a lot of ways to cope with common problems many students face.

My first advice would be first and foremost, always make sure you are being kind to yourself. It's not advisable to work 40 hours a week and also try to be a full time student. You need to set up a realistic home and school life so that way you are balanced with your assignments and other responsibilities. You need to give your body and your brain time to rest so you can absorb as much as you want to without restrictions. I found it useful to start working out to make sure that I'm dedicating the time I should be to myself and not working myself until exhaustion. Little things like exercise, yoga and meditation can do amazing things for your body as well as your mind. If you take care of your body, your body will take care of you."

–Felicia Santiago, Delgado Community College

About This Chapter

This chapter explores the many ways your health and well-being may be impacted by the choices you make. The goal of this material is to help you do the following:

- Understand how your mindset influences your emotions.
- Identify strategies to manage your moods.

- Describe differences between stress versus anxiety and sadness versus depression.
- Understand the mind and body connection.
- Identify ways to maintain and enhance your emotional health.
- Understand mental health risks and warning signs.
- Outline steps you can take to ask for help.
- Describe actions you can take to improve your physical health.

As a first-year college student you will make many choices without parental oversight, including the way you take care of your body and mind. Some choices put you on a path to health, and other choices can lead you down a path toward illness. There is a strong connection between success in college and your ability to stay healthy.

Health is more than a strong body that doesn't get sick. Health also includes your overall sense of well-being (mental and emotional, for example) and healthy coping strategies to manage life stressors. Good health is about making positive choices in all of these areas and avoiding destructive choices. It's about learning to be smart, to set boundaries, to watch out for your safety, and to take care of the one body that will carry you through life. While health and wellness are often interchanged, it is important to differentiate the two concepts. Health is a state of physical, mental, and social well-being, while wellness is a process through which people become aware of and make choices toward a healthy and fulfilling life.

In this chapter you will learn the skills you need to live a healthy lifestyle for both your mind and body. The first step is to focus on who you are and how you can create your best self. This includes how to promote self-efficacy (i.e., your belief in yourself) and create strategies that you can use to improve your resiliency (i.e., your ability to recover from challenges and adapt to change) during your transition into college. Next we will discuss the mind and body connection and how we need to consider managing both as a top priority every day.

We will address identifying your feelings and mood and build a vocabulary that helps you communicate with others. Then we will move into the topic of stress versus anxiety and how to manage both. At this point, prepared with identifying and managing your emotions with strategies you can use on your own, we will discuss when and how to seek help including the steps you must take to establish your own support system. Once you have a support system, we will then discuss the importance of managing your problems in a way that holds you accountable for your actions and behaviors yet provides a framework for others to help you effectively. We will then discuss the role of social media on your overall health and well-being and provide suggestions for creating boundaries with the use of social media. Lastly, we will help you to gain a better understanding of how to maintain physical health through good nutrition, maintaining physical activity, and sleep.

Creating Your Best Self

You are in college to fulfill an educational, personal, or professional goal. But it is just as important to work on creating your best self in the process, as who you are and what you believe you can achieve are just as important as the piece of paper you will receive at graduation. The first step in this process is identifying your positive attributes, which will be the foundation of your self-confidence. The belief in your abilities is also known as your self-efficacy. One way to increase your self-efficacy is to identify your strengths and values. Think of strengths as characteristics about ourselves that make us feel good about who we are, things we are good at, and parts of our personalities that make us good friends or good members of our community. Values are the things that matter to us the most. Typically, we do the best we can to live by our values; however, sometimes we struggle. Identifying strengths and values is a great place to start when making big life transitions. Being clear on what

you view as your strengths and the values that are important to you will help you with finding similar people to build your support network.

Let's get started. First, consider your strengths. In [Table 6.1](#), we have listed several examples of strengths. What are your strengths? What would your family say if we asked them about your strengths? What about your friends or community, would they have other examples of your strengths? Answer these questions to make a list of your own.

Next, let's consider your values. When finding your support network, friends, new clubs or organizations to join, one way to start is to understand your values and then look for others that have similar values. Your values have been shaped largely by your family, friends and the culture you grew up in.

Many of these values may be challenged as you go through college and grow as an independent person. Understanding your current values and recognizing when they are being challenged may give you some insights into why you value what you do and what changes you may be open to. Consider the values in the table below and then list some of yours. Did you come to these through your family, your community?

Achievement	Efficiency	Hard Work	Positivity
Adventure	Empathy	Health	Security
Ambition	Equality	Honesty	Selflessness
Balance	Excellence	Honor	Service
Belonging	Exploration	Humility	Simplicity
Calm	Fairness	Independence	Spontaneity
Challenge	Faith	Intelligence	Stability
Commitment	Family	Joy	Strength
Community	Fitness	Justice	Success
Competition	Flexibility	Love	Trustworthiness
Contribution	Freedom	Loyalty	Understanding
Control	Friends	Making a Difference	Uniqueness
Creativity	Fun	Merit	
Curiosity	Generosity	Openness	
Dependability	Growth	Originality	
Diversity	Happiness	Perfection	

Table 6.1

Throughout life, your values will often be challenged by other individuals. Someone may challenge your political views, or your religion, or your value in family. It is best to recognize your current values and then, as they are challenged, you can have a clearer understanding of the person you want to be.

Although your journey through college is just starting, you will soon have to make critical decisions as to what courses you want to take, you may have to choose a major you want to focus on, and you will be start to look for your next step, life after college. One of the most asked questions you will face on this journey is where you see yourself in the next three to five years. Use this time to draft your vision.

Your Overall Well-Being

Day-to-day, you most likely experience situations that either align with your values or go against them; you may undergo experiences that make you confident or unconfident. These situations may trigger strong emotions or lead you to react in a manner that you may later regret. During transition periods, such as the transition into college, you may be even more likely to have these experiences, particularly involving topics and people you do not know well. When these situations happen, it is best to consider your thoughts, consult available resources, and allow time to understand how to best navigate your emotions.

Understanding Your Mindset

Let's first talk about your mindset. Have you ever heard someone refer to "seeing the glass half full" or "seeing the glass half empty?" This is another way of saying that, given a situation that could be interpreted multiple ways, some see the positives (half full) while others see the negatives (half empty). It is natural to move in and out of these frames of mind depending on the situation, your confidence level, the amount of stress you have in your life at the time, and so on. Setbacks and mistakes will always occur, and it's okay and appropriate to feel negatively about them. With experience and practice, you will learn how to move on from these negative feelings and adapt your attitudes in order to promote success.

Let's consider the following example:

- Negative reaction: "I forgot to complete an assignment and now I will fail the course because this is the second time I missed submitting my work on time."

How does this feel? What emotions are you experiencing? What is your mood?

- Now let's reframe to a more positive reaction: "Yes, I will get a zero for that assignment. However, if I work hard on the final two assignments and get at least a B on my final exam, I could improve my final grade to at least a C+."

How does this new thought feel in your body and mind? Is it different in a good way or not so good way? What emotions are you experiencing now? How has your mood changed?

Most likely you feel differently in your body and in your mind when you consider each of these responses. When the thinking is that the course is lost, you may feel disappointed, frustrated, and uncertain regarding the future. However, in the more positive reframing of the situation, the mood may shift to one of calmness and even purpose, because there is a way forward.

A key aspect of effective and positive attitudes is the awareness and ability to take responsibility for situations in which you contributed to the outcome. In the example above, the person did recognize that they were the ones who forgot to complete the assignment. Consider similar situations you've been in. Do you tend to put the responsibility for a missed assignment or a bad grade on yourself or your instructor? Do you tend to blame technology, unclear instructions, or too much work? While unfair situations can certainly occur, it is very important to recognize the role we play in them, and take ownership of mistakes and any extra work we need to undertake.

The ability to reconsider situations and find positive ways forward is a critical skill in navigating not only your college experience, but throughout your life, career, and relationships. To do that effectively, you will also need to identify your feelings and emotions. Examining what you are feeling will help you to more easily navigate those emotions. By understanding your emotions and how to communicate with others about how you are feeling, you will

decrease the chances of behaviors that may have negative consequences.

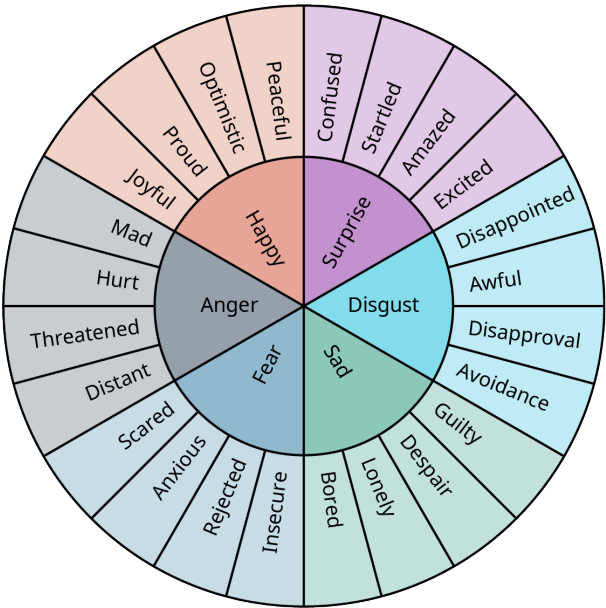


Figure. Tools like emotion wheels, based on Robert Plutchik's original, more complex work, can help us understand our feelings.

Expanding your emotional vocabulary (see [Figure 6.2](#)) will allow you to be more specific in identifying the feelings you experience. Identifying your emotions will help you to find a solution or coping strategy more quickly. Using a tool such as this emotion wheel enables you to identify the emotion you may be experiencing. You may think that you are “angry”; however, after you look at the emotion wheel you may realize you are hurt or disappointed. Also, by identifying your emotions at a given time, you will be able to improve your mood and the relationship between your feelings and mood. Once you have a better understanding of the relationships between your feelings and mood, you’ll be better equipped to overcome situations in which you have low moods versus when your moods are more positive.

This chapter is derived from *College Success Concise*, “[Introduction](#),” “[Creating Your Best Self](#),” and “[Your Overall Well-Being](#).” CC-BY 4.0.

35. Taking Care of Your Physical Health

You have one body. Treat it well so as to maximize its ability to serve you throughout your life. Often physical health gets moved to the bottom of the priority list when we are busy. Taking care of your physical health doesn't mean six-pack abs or training for a marathon. It means honoring your physical needs so your body can function properly, feeding your cells the nutrients that will keep your body working well your entire life, and minimizing exposure to toxins to reduce your risk of disease.

Healthy Eating

While it's not the only thing that contributes to great health, what you eat makes a huge difference. We have 37 trillion cells in our body. The only way they function optimally is with good nutrition. As a college student, you will be surrounded by temptations to eat poorly. Although it is okay to choose unhealthy food options in moderation, your goal will be to focus on making healthier choices to fuel your mind and body daily.

Whole Foods vs. Processed Foods

Choose whole foods. Whole foods are any foods that have not been processed, packaged, or altered in any way. Whole foods are an essential part of a healthy diet because they contain the vitamins and minerals our bodies need.

Examples of whole foods include the following:

- Vegetables: Carrots, broccoli, kale, avocados, cauliflower, spinach, peppers
- Fruits: Apples, bananas, blueberries, strawberries, grapes, melons, peaches
- Grains: Brown rice, oatmeal, barley, buckwheat, quinoa, millet
- Beans: Black, pinto, kidney, black-eyed peas, chickpeas

Minimize non-whole foods, often called processed foods. These are foods that have been processed, such as cookies, hot dogs, chips, pasta, deli meat, and ice cream. Even seemingly healthy foods like yogurt, granola, and other cereals are processed and should be checked for added sugar and other unhealthy ingredients. Review the label on these items and look for products that have less than 5 grams of fat and 10 grams of added sugars per serving. Also, review the dietary fiber and select products that have at least 3 grams per serving. Dietary fiber is a good thing; the higher the number the better. Fiber makes you feel full, and helps with digestion. Following these simple guidelines will help you select the best foods.

The average American eats 62 percent of their daily calories from processed foods.²² In order for your body to be as healthy as possible, it's extremely important to include lots of whole foods in your diet.

“When you eat junk food you think junk thoughts.”

— Michael Bernard Beckwith

What You Drink

What is your go-to drink when you are thirsty? Soda? Juice? Coffee? How about water? Most of your blood and every cell in your body is composed of water. In fact, water makes up 60 to 80 percent of our entire body mass, so when we don't consume enough water, all kinds of complications can occur. To function properly, all the cells and organs in our body need water. Proper hydration is key to

overall health and well-being. By the time you feel thirsty, you are already dehydrated. Dehydration is when your body does not have as much water and fluids as it needs.

Researchers at Virginia Polytechnic discovered that mild dehydration (as little as losing 1 to 2 percent of body water) can impair cognitive performance.²³ Water increases energy and relieves fatigue, helps maintain weight, flushes toxins, improves skin complexion, improves digestion, and is a natural headache remedy (your brain is 76 percent water). Headaches, migraines, and back pains are commonly caused by dehydration. Your body will also let you know it needs water by messaging through muscle cramps, achy joints, constipation, dry skin, and of course a dry mouth.

Aside from feeling thirsty, the easiest way to tell if you are dehydrated is to check your urine. If it is a dark shade of yellow, your urine is over-concentrated with waste. Water helps to flush out waste, so when you're hydrated there's a higher ratio of water to waste, turning your urine a lighter color.

One of the best habits you can develop is to drink a large glass of water first thing in the morning. Your body becomes a little dehydrated as you sleep. Drinking water first thing in the morning allows your body to rehydrate, which helps with digestion and helps move the bowels for regularity in the morning. It also helps to eliminate the toxins your liver processed while you slept.

Check out [this video](#) for more benefits of drinking water.

"But I don't like the taste of water!" No problem. Select any non-caloric beverage. Flavored waters are a perfect choice and there are many options with and without bubbles or caffeine. Limit your intake of caloric beverages such as juice, soda, and high-calorie beverages at your favorite coffee shop.

Exercise

Many people exercise to maintain or lose weight, or increase

cardiovascular health, but physical outcomes are only one potential benefit of exercise. Regular exercise can improve the quality of your sleep, strengthen your bones, increase your energy levels, and reduce your risk of high blood pressure, diabetes, and even some forms of cancer.²⁴ Regular exercise is key to living a long, healthy life.

There are three basic types of exercise—flexibility, strength training, and cardiovascular.

1. Flexibility is the range in motion of the joints in your body, or the ability for your muscles to move freely. Without adequate flexibility, daily activities can become difficult to do. Stretching increases your body's flexibility, improves circulation, and sends more blood to your muscles. Just a few minutes a day of deep stretching can have a powerfully positive impact on your health. Yoga and Tai Chi are other wonderful ways to improve your flexibility.
2. Strength is the body's ability to produce force. Strength training helps improve muscle strength and muscle mass, which will become increasingly important as you age. Increased muscle helps your body burn calories more efficiently. Strength training also helps maintain bone strength. In addition to lifting weights, other ways to build strength include push-ups, pull-ups, squats, lunges, and yoga.
3. Cardiovascular is the body's ability to use oxygen efficiently during exercise. As one's ability to use oxygen improves, daily activities can be performed with less fatigue. Great cardiovascular modes of exercise include jogging, swimming, biking, and HIIT (high intensity interval training). HIIT is short bursts of intense activity followed by a rest period. With HIIT, you can squeeze a lot of benefit into a short period of time.
[Click here for an example of HITT workouts.](#)

Research indicates that regular aerobic exercise can support memory and cognition. In these studies, aerobic exercise generally

increases the number of new neurons created in the brain's memory center and also reduces inflammation.²⁵ Inflammation in the brain may contribute to the development of dementia and other neurodegenerative conditions. It might be good timing to take a jog before you sit down to study for a test!

It's important to move throughout the day, and every day. Aim to exercise for 150 minutes a week. You don't have to be the king or queen of CrossFit; it's the daily movement that is most important. Research has found that three brisk walks for 10 minutes a day is a great start. While it is best to integrate all three types of exercise, the best exercise is the one you will actually do. Find and commit to a form of exercise you will enjoy.

Sleep

How often do you wake up filled with energy, eager to embrace the day? How often do you wake up still tired, with heavy eyes that just don't want to open? Your answer to these questions has a direct bearing on the quality of your decisions, your ability to use good judgment, the extent to which you can focus in the classroom, and ultimately your long-term health.

A great night's sleep begins the minute you wake up. The choices you make throughout the day impact how quickly you fall asleep, whether you sleep soundly, and whether your body is able to successfully complete the cycle of critical functions that only happen while you sleep.

Sleep is the foundation of health, yet almost 40 percent of adults struggle to get enough sleep.²⁶ Lack of sleep affects mental and physical performance and can make you more irritable. The diminished energy that results from too little sleep often leads us to make poor decisions about most things, including food. Think about the last time you were really tired. Did you crave pizza, donuts, and fries—or a healthy salad? Studies have shown that people who sleep

less are more likely to eat fewer vegetables and eat more fats and refined carbohydrates, like donuts.[27](#)

With sufficient sleep it is easier to learn, to remember what you learned, and to have the necessary energy to make the most of your educational experience. Without sufficient sleep it is harder to learn, to remember what you learned, and to have the energy to make the most of your educational experience. It's that simple.

What Happens When We Sleep?

Sleep is a time when our bodies are quite busy repairing and detoxifying. While we sleep we fix damaged tissue, toxins are processed and eliminated, hormones essential for growth and appetite control are released and restocked, and energy is restored.

A review of hundreds of sleep studies concluded that most adults need around eight hours of sleep to maintain good health. Some people may be able to function quite well on seven and others may need closer to nine, but as a general rule, most people need a solid eight hours of sleep each night. And when it comes to sleep, both quantity and quality are important.

When sleep is cut short, the body doesn't have time to complete the phases for the repair and detoxification.

A tiny lobe called the pineal gland helps us fall asleep. The pineal gland secretes melatonin to calm the brain. The pineal gland responds to darkness. If you are watching TV until the minute you go to bed and then sleep with the artificial light from smartphones and other devices, your brain is tricked into thinking it is still daylight; this makes it difficult for the pineal gland to do its job. In addition, if the TV shows you watch before bed are violent or action-packed, your body will release cortisol (the stress hormone). Anything that creates stress close to bedtime will make it more difficult to fall asleep. A bedtime practice of quiet activities like

reading, journaling, listening to music, or meditation will make it much easier to fall asleep.

What Happens If You Don't Get Enough Sleep?

Lack of sleep has a big impact on your overall state of health and well-being. Studies have linked poor sleep to a variety of health problems. The U.S. Centers for Disease Control and Prevention have identified sleep deprivation as a public health epidemic.

Some of the health risks of insufficient sleep include the following:

Increased risk of heart

attack and stroke: In his book *Why We Sleep*, Matthew Walker, PhD, shares Japanese research showing that male workers who average six hours of sleep or less are 400 to 500 percent more likely to suffer one or more cardiac arrests than those getting more than six hours of sleep each night. Another study of women between the ages of 20 and 79 found that those who had mild sleep disturbance such as taking longer to fall asleep or waking up one or more times during the night were significantly more likely to have high blood pressure than those who fell asleep quickly and slept soundly.²⁸

Impaired cognitive function: Even one night of sleeping less than six hours can impact your ability to think clearly the next day.

Increased risk of accidents: Sleep deprivation slows your reaction time, which increases your risk of accidents. You are three times more likely to be in a car crash if you are tired.

According to the American Sleep Foundation, 40 percent of

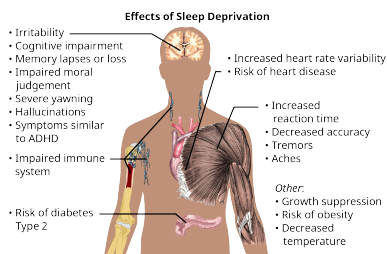


Figure. The Effects of Sleep Deprivation This visual depicts many of the ways we are affected by insufficient sleep. (Credit: Häggström, Mikael (2014). "Medical gallery of Mikael Häggström 2014". WikiJournal of Medicine. Public Domain.)

people admitted to falling asleep behind the wheel at least once. A Governor's Highway Safety Association report estimates there are 6,400 fatal drowsy-driving crashes each year. Fifty percent of these crashes involve drivers under the age of 25.[29](#)

Driving after 20 hours without sleep is the equivalent of driving with a blood-alcohol concentration of 0.08 percent—the U.S. legal limit for drunk driving.

Weight gain/increased risk for obesity: Sleep helps balance your appetite by regulating hormones that play a role in helping you feel full after a meal. Also, cortisol is released during times of anxiety, and exhaustion causes your body to produce more cortisol. This can stimulate your appetite.

Increased risk of cancer: Tumors grow up to three times faster in laboratory animals with severe sleep dysfunctions. Researchers believe this is because of disrupted melatonin production, as melatonin has both antioxidant and anticancer activity.

Increased emotional intensity: The part of the brain responsible for emotional reactions, your amygdala, can be 60 percent more reactive when you've slept poorly, resulting in increased emotional intensity.

Tips to Improve the Quality of Your Sleep

Now that you are more aware of the ways insufficient sleep harms your body, let's review some of the things you can do to enhance your sleep.

Make sleep a priority.

It can be challenging once in college, but try to get on a schedule where you sleep and wake at the same time every day to get your body accustomed to a routine. This will help your body get into a sleep rhythm and make it easier to fall asleep and get up in the morning.

Sleep in a cool, quiet, dark room.

Create a sleeping environment that is comfortable and conducive to sleep. If you can control the temperature in your room, keep it cool in the evening. Scientists believe a cool bedroom (around 65 degrees) may be best for sleep, since it mimics our body's natural temperature drop. Exposure to bright light suppresses our body's ability to make melatonin, so keep the room as dark as possible. A 2010 study in *The Journal of Clinical Endocrinology & Metabolism* found that individuals exposed to room light “during the usual hours of sleep suppressed melatonin by greater than 50%.”³⁰ Even the tiniest bit of light in the room (like from a clock radio LCD screen) can disrupt your internal clock and your production of melatonin, which will interfere with your sleep. A sleep mask may help eliminate light, and earplugs can help reduce noise.

Avoid eating late or drinking alcohol or caffeine close to bedtime.

It is best to finish eating at least two hours before bedtime and avoid caffeine after lunch. While not everyone is affected in the same way, caffeine hangs around a long time in most bodies. Although alcohol will make you drowsy, the effect is short-lived and you will often wake up several hours later, unable to fall back to sleep. Alcohol can also keep you from entering the deeper stages of sleep, where your body does most of the repair and healing. A 2013 Scientific Research study concluded that “energy drinks, other caffeinated beverages and alcoholic beverages are risk factors of poor sleep quality.” It's important to finish eating hours before bedtime so your body is able to heal and detoxify and it is not spending the first few hours of sleep digesting a heavy meal.

Start to wind down an hour before bed.

Making mindfulness and/or a gratitude practice (as discussed previously) a part of your bedtime routine are well documented as improving an individual's ability to fall asleep and have better quality of sleep. There are also great apps to help with relaxation, stress release, and falling asleep which include meditations, gratitude practice, and mindfulness. Consider the [Insight Timer](#) app, or any of the [free apps](#) listed by the American Sleep Association.

Exercise for 30 minutes a day.

One of the biggest benefits of exercise is its effect on sleep. A study from Stanford University found that 16 weeks in a moderate-intensity exercise program allowed people to fall asleep about 15 minutes faster and sleep about 45 minutes longer. Walking, yoga, swimming, strength training, jumping rope—whatever it is, find an exercise you like and make sure to move your body every day.

Improve your diet.

Low fiber and high saturated fat and sugar intake is associated with lighter, less restorative sleep with more wake time during the night. Processed food full of chemicals will make your body work extra hard during the night to remove the toxins and leave less time for healing and repair.

Sleep affects how we look, feel, and function on a daily basis and is vital to our health and quality of life. When you get the sleep your body needs, you look more vibrant, you feel more vibrant, and you have the energy to live your best life.

Now, with a better understanding of the benefits of getting the recommended hours of nightly sleep and the health risks of not getting enough sleep, what changes can you make to improve the quality and quantity of your sleep?

Difficulty sleeping may be a sign of something else happening in your mind or body (i.e., anxiety, insomnia, sleep apnea). If you are doing all the right things and still have trouble falling or staying asleep, talk to your doctor or go to your student health services.

Here are some resources to learn more:

- [Healthy Sleep](#), Harvard Medical School Division of Sleep Medicine
- [Insomnia Treatment](#), American Association of Sleep Medicine
- [Sleep Medicine](#), Society of Behavioral Sleep Medicine

Footnotes

- [22](https://www.mensjournal.com/features/joel-fuhrman-the-doctor-is-out-there-20121107/)Dr. Joel Furhman <https://www.mensjournal.com/features/joel-fuhrman-the-doctor-is-out-there-20121107/>
- [23](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4207053/)University of Virginia <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4207053/>
- [24](https://www.health.harvard.edu/newsletter_article/Exercise_as_medicine)Harvard Medical School https://www.health.harvard.edu/newsletter_article/Exercise_as_medicine
- [25](#)Kelty, Journal of Applied Physiology
- [26](https://health.clevelandclinic.org/lack-sleep-make-crave-junk-food/)Cleveland Clinic, <https://health.clevelandclinic.org/lack-sleep-make-crave-junk-food/>
- [27](https://health.clevelandclinic.org/lack-sleep-make-crave-junk-food/)Cleveland Clinic, <https://health.clevelandclinic.org/lack-sleep-make-crave-junk-food/>
- [28](#)Matthew Walker, PhD Why We Sleep
- [29](#)Governors Highway Safety Association
- [30](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3047226/)JCEM, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3047226/>

36. Sleep

Questions to consider:

- How much sleep is enough?
- What are the impacts of sleep deprivation?
- Which strategies and support can enhance sleep?

How often do you wake up filled with energy, eager to embrace the day? How often do you wake up still tired, with heavy eyes that just don't want to open? Your answer to these questions has a direct bearing on the quality of your decisions, your ability to use good judgement, the extent to which you can focus in the classroom, and ultimately your long-term health.

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What Happens When We Sleep?

Sleep is a time when our bodies are quite busy repairing and detoxifying. While we sleep we fix damaged tissue, toxins are processed and eliminated, hormones essential for growth and appetite control are released and restocked, and energy is restored. Sleep is essential for a healthy immune system. How many colds do you catch a year? How often do you get the flu? If you are often sick, you do not have a healthy immune system, and sleep deprivation may be a key culprit.

A review of hundreds of sleep studies concluded that most adults need around eight hours of sleep to maintain good health. Some people may be able to function quite well on seven and others may need closer to nine, but as a general rule, most people need a solid eight hours of sleep each night. And when it comes to sleep, both quantity and quality are important.

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A lack of sleep can change the way your genes express themselves. One notable study involved a group of healthy adults limited to six hours of sleep for one week. Researchers then measured the change in gene activity compared to the prior week when these same people were getting a full eight hours of sleep a night. The lack of sleep caused the activity of 711 genes to become distorted. About half of the genes were switched off by a lack of sleep, and these genes were associated with the immune system. The other half of the genes experienced increased activity from a lack of sleep, and these were genes associated with the promotion of tumors, genes associated with long-term chronic inflammation, and stress genes.¹²

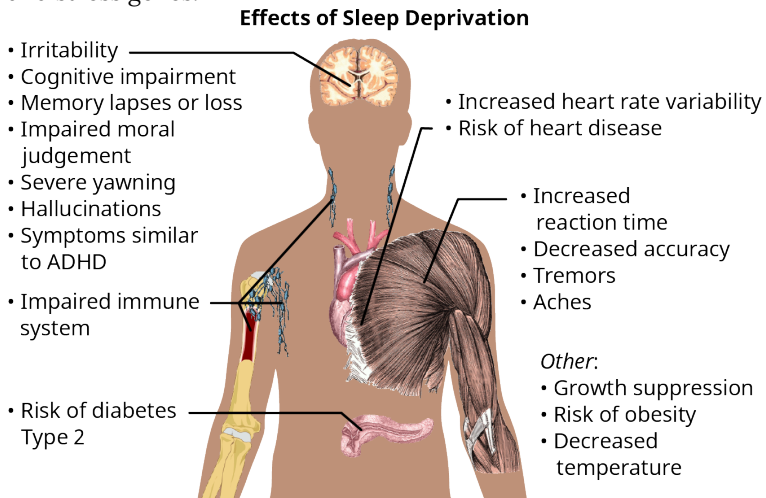


Figure 11.5 The Effects of Sleep Deprivation This visual depicts many of the ways we are affected by insufficient sleep. (Credit: Häggström, Mikael (2014). "Medical gallery of Mikael Häggström

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Some of the health risks of insufficient sleep include the following:

Increased risk of heart attack and stroke: In his book *Why We Sleep*, Matthew Walker, PhD, shares Japanese research showing that male workers who average six hours of sleep or less are 400 to 500 percent more likely to suffer one or more cardiac arrests than those getting more than six hours of sleep each night. Another study of women between the ages of 20 and 79 found that those who had mild sleep disturbance such as taking longer to fall asleep or waking up one or more times during the night were significantly more likely to have high blood pressure than those who fell asleep quickly and slept soundly.¹³

Impaired cognitive function: Even one night of sleeping less than six hours can impact your ability to think clearly the next day.

Increased risk of accidents: Sleep deprivation slows your reaction time, which increases your risk of accidents. You are three times more likely to be in a car crash if you are tired. According to the American Sleep Foundation, 40 percent of people admitted to falling asleep behind the wheel at least once. A Governor's Highway Safety Association report estimates there are 6,400 fatal drowsy driving crashes each year. Fifty percent of these crashes involve drivers under the age of 25.¹⁴

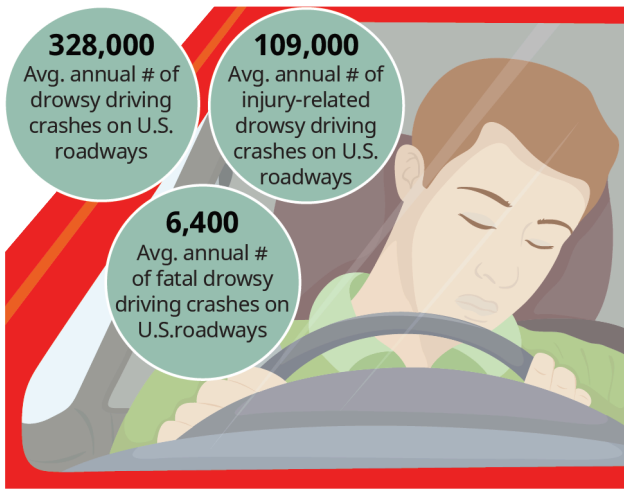


Figure 11.6 Driving while drowsy puts you, your passengers, and many others in danger. (Credit: Modification of work by Governors Highway Safety Association.)

Driving after 20 hours without sleep is the equivalent of driving with a blood-alcohol concentration of 0.08 percent—the U.S. legal limit for drunk driving.

Weight gain/increased risk for obesity: Sleep helps balance your appetite by regulating hormones that play a role in helping you feel full after a meal. Also, cortisol is released during times of anxiety, and exhaustion causes your body to produce more cortisol. This can stimulate your appetite.

Increased risk of cancer: Tumors grow up to three times faster in laboratory animals with severe sleep dysfunctions. Researchers believe this is because of disrupted melatonin production, as melatonin has both antioxidant and anticancer activity.

Increased emotional intensity: The part of the brain responsible for emotional reactions, your amygdala, can be 60 percent more reactive when you've slept poorly, resulting in increased emotional intensity.

For more information on the advantages and health risks of sleep

watch this [TED Talk](#) by Matt Walker, PhD, Director of the Sleep Center at U California Berkeley.

Tips to Improve the Quality of Your Sleep

Now that you are more aware of the ways insufficient sleep harms your body, let's review some of the things you can do to enhance your sleep.

Make sleep a priority.

It can be challenging in college, but try to get on a schedule where you sleep and wake at the same time every day to get your body accustomed to a routine. This will help your body get into a sleep rhythm and make it easier to fall asleep and get up in the morning.

Sleep in a cool, quiet, dark room.

Create a sleeping environment that is comfortable and conducive to sleep. If you can control the temperature in your room, keep it cool in the evening. Scientists believe a cool bedroom (around 65 degrees) may be best for sleep, since it mimics our body's natural temperature drop. Exposure to bright light suppresses our body's ability to make melatonin, so keep the room as dark as possible. A 2010 study in *The Journal of Clinical Endocrinology & Metabolism* found that individuals exposed to room light “during the usual hours of sleep suppressed melatonin by greater than 50%.”¹⁵ Even the tiniest bit of light in the room (like from a clock radio LCD screen) can disrupt your internal clock and your production of melatonin, which will interfere with your sleep. A sleep mask may help eliminate light, and earplugs can help reduce noise.

Avoid eating late or drinking alcohol or caffeine close to bedtime.

It is best to finish eating at least two hours before bedtime and avoid caffeine after lunch. While not everyone is affected in the same way, caffeine hangs around a long time in most bodies.

Although alcohol will make you drowsy, the effect is short-lived and you will often wake up several hours later, unable to fall back to sleep. Alcohol can also keep you from entering the deeper stages of sleep, where your body does most of the repair and healing. A 2013 *Scientific Research* study concluded that “energy drinks, other caffeinated beverages and alcoholic beverages are risk factors of poor sleep quality.” It’s important to finish eating hours before bedtime so your body is able to heal and detoxify and it is not spending the first few hours of sleep digesting a heavy meal.

Start to wind down an hour before bed.

There are great apps to help with relaxation, stress release, and falling asleep. Or you can simply practice 4-7-8 breathing to calm your nervous system—breathe in to the count of 4, hold your breath for a count of 7, and release your breath slowly to the count of 8.

Consider the [Insight Timer](#) app, or any of the [free apps](#) listed by the American Sleep Association.

Exercise for 30 minutes a day.

One of the biggest benefits of exercise is its effect on sleep. A study from Stanford University found that 16 weeks in a moderate-intensity exercise program allowed people to fall asleep about 15 minutes faster and sleep about 45 minutes longer. Walking, yoga, swimming, strength training, jumping rope—whatever it is, find an exercise you like and make sure to move your body every day.

Improve your diet.

Low fiber and high saturated fat and sugar intake is associated with lighter, less restorative sleep with more wake time during the night. Processed food full of chemicals will make your body work extra hard during the night to remove the toxins and leave less time for healing and repair.

Sleep affects how we look, feel, and function on a daily basis and is vital to our health and quality of life. When you get the sleep your body needs, you look more vibrant, you feel more vibrant, and you have the energy to live your best life.

Now, with a better understanding of the benefits of getting the recommended hours of nightly sleep and the health risks of not

getting enough sleep, what changes can you make to improve the quality and quantity of your sleep?

What If I'm Doing All These Things and I Still Have Trouble Sleeping?

People that have trouble falling asleep also often have low magnesium levels (sources suggest that over half of the adults in the United States are magnesium deficient). You can ask your doctor to check your magnesium levels, but you can also focus on eating magnesium-rich foods to help. One of the best magnesium-rich snacks is pumpkin seeds. Other great sources are almonds, sesame seeds, and walnuts.

Difficulty sleeping may be a sign that you have a clinical sleep problem, such as insomnia or sleep apnea. If you are doing all the right things and still have trouble falling or staying asleep, talk to your doctor.

These are some resources for insomnia:

- [Healthy Sleep](#), Harvard Medical School Division of Sleep Medicine
- [Insomnia Treatment](#), American Association of Sleep Medicine
- [Sleep Medicine](#), Society of Behavioral Sleep Medicine

ANALYSIS QUESTION

Do you have a ritual to shut down your day and calm your mind? If yes, can you identify two ways to improve upon your current ritual? If no, what three things can you put in place to prepare your body and mind for a restorative night's sleep?

Footnotes

- [10](https://news.gallup.com/poll/166553/less-recommended-amount-sleep.aspx)<https://news.gallup.com/poll/166553/less-recommended-amount-sleep.aspx>
- [11](https://health.clevelandclinic.org/lack-sleep-make-crave-junk-food/)Cleveland Clinic, <https://health.clevelandclinic.org/lack-sleep-make-crave-junk-food/>
- [12](https://www.ncbi.nlm.nih.gov/pubmed/23440187)Archer, <https://www.ncbi.nlm.nih.gov/pubmed/23440187>
- [13](#)Matthew Walker, PhD **Why We Sleep**
- [14](#)Governors Highway Safety Association
- [15](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3047226/)JCEM, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3047226/>

37. Taking Care of Your Emotional Health

Questions to consider:

- What are some of the ways to tell if you are holding onto stress?
- How do mindfulness and gratitude encourage emotional health?

Identifying and Managing Stress

According to a 2018 report from the American College Health Association, in a 12-month period 42 percent of college students reported that they have felt so depressed it was difficult to function, and 63 percent reported feeling overwhelming anxiety.¹⁶ Your ability to manage stress, maintain loving relationships, and rise to the demands of school and work all impact your emotional health.

Stress is not always bad. In fact, some stress is helpful. Good stress is stress in amounts small enough to help you meet daily challenges. It's also a warning system that produces the fight-or-flight response, which increases blood pressure and your heart rate so you can avoid a potentially life-threatening situation. Feeling stressed can be perfectly normal, especially during exam time. It can motivate you to focus on your work, but it can also become so overwhelming you can't concentrate. It's when stress is chronic (meaning you always feel stressed) that it starts to damage your body.

What Chronic Stress Does to Your Body

Do you find it difficult to concentrate or complete your work? Are you frequently sick? Do you have regular headaches? Are you more anxious, angry, or irritable than usual? Do you have trouble falling asleep or staying awake? If you answered yes to any or all of these questions, you may be holding on to too much stress.

Stress that hangs around for weeks or months affects your ability to concentrate, makes you more accident-prone, increases your risk for heart disease, can weaken your immune system, disrupts your sleep, and can cause fatigue, depression, and anxiety.¹⁷ To learn more about what stress does to your body, click here: apa.org/helpcenter/stress.

Some people refer to the time we are living in as the age of overload. It's easy to get worn down by social media and the constant news cycle, and to be overwhelmed by too many choices. We live in a fast-paced, always-on world with a lot of pressures. The military created the VUCA acronym for the world we currently live in. VUCA stands for volatile, uncertain, complex, and ambiguous, and as a result of living in this VUCA world, many of us are in a constant state of overdrive.

You will have stress. Stress is inevitable. It's how you deal with it that can make all the difference. One of the most important things you can do is to keep perspective on your stressors. When feeling stressed, ask yourself, on a scale of 1 to 100, how stressful a situation is this? Will I even remember this three years from now? When facing potential stressors, the way you view what you're experiencing can intensify your stress or minimize it.

There are many ways to manage stress. Take a look at some of the ideas in the stress toolkit below. Which ones have you tried? Which ones do you want to try? It's helpful to have different tools for different situations—for example, a calming yoga pose in your dorm room and deep breathing in the classroom.

Mindfulness and Gratitude

Deep breathing, mindfulness, and a practice of gratitude are some of the most effective ways to manage stress and take care of your emotional health.

Mindfulness

Mindfulness means being present with your thoughts, feelings, bodily sensations, and surrounding environment. Mindfulness is also without judgement—meaning there is no right or wrong way to think or feel in a given moment. When we practice mindfulness, our thoughts tune into what we're sensing in the present moment rather than rehashing the past or imagining the future.¹⁸

Anything that keeps you present in the moment and gives your prefrontal cortex (the reasoning and thinking part of your brain) a break is practicing mindfulness. Mindfulness can be a slow walk; looking intently at the grass, trees, flowers, or buildings; and being aware of what you are sensing and feeling. Mindfulness can be sitting quietly—even sitting still in a quiet place for as little as a few minutes can reduce heart rate and blood pressure.¹⁹

Developing a practice of mindfulness is easier than you may think:

- **Slow down.** From brushing your teeth, to washing your face, to shampooing your hair—can you take the speed out of getting ready in the morning? Focus on the activity, pay attention to what you are doing, stay present (this means don't think about what happened last night or what's in store for the day, just stay focused on the activity), and take your time.
- **Focus on your breath.** How fast are you breathing? Is your breath coming from your chest or your belly? Can you feel the air come through your nose on the inhale? Can you slow down the exhale? Can you feel your body relax when you slow the

exhale?

- **Connect to your environment.** Walk for a few minutes, focused on the world around you—look at the leaves on the trees or the light at the corner, listen to the sounds around you, stay with your surroundings, and observe what you see and hear around you.

“We can’t change the world, at least not quickly, but we can change our brains. By practicing mindfulness all of us have the capacity to develop a deeper sense of calm.”

— Rick Hanson, author, *Resilient*

Deep Breathing

When people hear mindfulness they often think meditation. While meditation is one method of mindfulness, there are many others that may be simpler and easier for you to practice. Deep breathing helps lower stress and reduce anxiety, and it is simple yet very powerful. A daily mindful breathing practice has been shown to reduce test anxiety in college students.²⁰ A 2-4-6-8 breathing pattern is a very useful tool that can be used to help bring a sense of calm and to help mild to moderate anxiety. It takes almost no time, requires no equipment, and can be done anywhere:

- – Start by quickly exhaling any air in your lungs (to the count of 2).
- – Breathing through your nose, inhale to the count of 4.
- – Hold your breath for a count of 6.
- – Slowly exhale through your mouth to the count of 8.

This is one round. Do not repeat the quick exhale again. Instead start round two with an inhale through your nose to the count of 4, hold for 6, and exhale to 8. Repeat for three more rounds to relax your body and mind.

With practice, 2-4-6-8 breathing will become a useful tool for times when you experience tension or stress.

Meditation

UCLA Health offers a robust collection of evidence-based meditation practices, designed to cultivate emotional well-being and resilience. Initially recommended by various counselors and mental health professionals, their free app serves as an accessible gateway into the realm of mindfulness. Their YouTube Channel features enriching content, such as [Diana Winston's Breathing Meditation](#), which guides novices and experts alike through the nuances of meditative breathing.

The foundational premise of UCLA Health's approach to meditation is one of inclusivity and self-compassion. Recognize that your mind will inevitably wander; view these moments not as failures but as opportunities to return to the present. Each re-centering is akin to a “bicep curl for the brain,” enhancing mental fortitude over time. You can initiate your practice with brief sessions—perhaps 3 minutes to begin—and gradually extend the duration to 15 or 20 minutes.

For those seeking additional resources, other noteworthy apps in the realm of meditation include Insight Timer, CALM, and Headspace. The College of Western Idaho has also partnered with [Therapy Assistance Online \(TAO\)](#). Students have free access to over 150 educational sessions related to mental health and wellness.

Gratitude

Too often people think it is the external factors that bring us joy and happiness, when really it's all related to internal work. According to UCLA's Mindfulness Awareness Research Center, “Having an

attitude of gratitude changes the molecular structure of the brain, and makes us healthier and happier. When you feel happiness, the central nervous system is affected. You are more peaceful, less reactive and less resistant.”²¹

Numerous studies show that people who count their blessings tend to be happier and less depressed. In a UC Berkeley study, researchers recruited 300 people who were experiencing emotional or mental health challenges and randomly divided them into three groups. All three groups received counseling services. The first group also wrote a letter of gratitude every week for three weeks. The second group wrote about their thoughts and feelings with negative experiences. The third group received only counseling. The people in the group who wrote gratitude letters reported significantly better mental health for up to 12 weeks after the writing exercise ended.

This would suggest that a healthy emotional self-care practice is to take note of good experiences or when you see something that makes you smile. Think about why the experience feels so good. According to Rick Hanson, author of *Resilient*, “Each day is strewn with little jewels. The idea is to see them and pick them up. When you notice something positive, stay with the feeling for 30 seconds. Feel the emotions in your whole body. Maybe your heart feels lighter or you’re smiling. The more you can deepen and lengthen positive experiences the longer those positivity neurons in your brain are firing—and the longer they fire the stronger the underlying neural networks become. Repeat that process a half dozen times a day and you’ll feel stronger, more stable and calmer within a few weeks.”

Build a Stress Toolkit	
Practice self-compassion	Laugh with friends
Eat clean food	Listen to music
Mindfulness	Drink calming tea
Meditation	Watch a funny movie
Deep breathing (2-4-6-8)	Write in a gratitude journal
A walk in nature	Change phone screen to this picture
Exercise/Movement	Change passwords to calming words
Yoga, Tai chi	Keep something in your backpack that reminds you to take a deep breath every time you see it
Dance	
HIIT	
Run, Spin, Lift	
Epsom salt baths	
Hugs	

Figure 11.7 Do you have a stress toolkit filled with a variety of stress-coping tools to help you navigate any stressful situation? (Credit: Modification of work by Robin Benzrihem)

ACTIVITY

Take a look at some of the suggested tools for your stress toolkit. Which ones have you tried? Have they been effective in helping you manage stress? Ask two friends or family members about their favorite stress-management strategies. What has worked for you and others that is not on this list? Identify two new tools you would like to explore and articulate how you will determine if they work for you, and then you can confidently add them to your stress toolkit.

Footnotes

- [16](https://www.acha.org/documents/ncha/NCHA-16)American College Health Association 2018 report
[https://www.acha.org/documents/ncha/NCHA-](https://www.acha.org/documents/ncha/NCHA-16)

II_Spring_2018_Reference_Group_Executive_Summary.pdf

- [17](#)The University of Maryland Medical Center
UMMC, <https://www.umms.org/ummc>
- [18](#)Moran, Joan; University of California at Los Angeles,
<http://newsroom.ucla.edu/stories/gratitude-249167>
- [19](#)The Greater Good Science Center, UC Berkeley
<https://ggia.berkeley.edu/practice/>
- [20](#)Levitin, Time Special Edition 2018, The New Mindfulness
- [21](#)2016 Study Journal of PLoS One, <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000316>

38. Taking Care of Your Mental Health

The World Health Organization ranks mental health conditions as the leading cause of disability in the United States. One in four adults experience a diagnosable mental health disorder in any given year, yet more than half will not seek treatment. The primary reason people don't seek the help they need is shame and fear of judgment from friends, family, and coworkers. It is important to remove any stigma associated with mental health and encourage those who need help to seek support.

WHAT STUDENTS SAY

1. In your opinion, which of the following is the most significant health issue facing college students?
 - a. stress and/or exhaustion
 - b. drinking and/or substance abuse
 - c. unhealthy eating
 - d. unhealthy relationships
 - e. safety
2. Which of the following best describes your experience or outlook regarding healthy eating while in college?
 - a. I'm generally able to eat healthy food most of the time.
 - b. I have difficulty eating healthy food because of lack of choices on campus.
 - c. I don't have enough money to eat healthy food.
 - d. I don't have enough time to focus on eating healthy food.
 - e. I need to learn more about healthy eating.
 - f. It's not something I'm very concerned about.

3. When you are facing an issue regarding your emotions, stress, mental health, or relationships, what do you typically do?
- Wait for it to pass or work through it.
 - Talk to a health professional.
 - Talk to friends or family.
 - Talk to another trusted person such as a teacher, RA, or religious person.
 - Use a method such as meditation, exercise, or something similar.

You can also take the anonymous [What Students Say](#) surveys to add your voice to this textbook. Your responses will be included in updates.

Students offered their views on these questions, and the results are displayed in the graphs below.

In your opinion, which of the following is the most significant health issue facing college students?

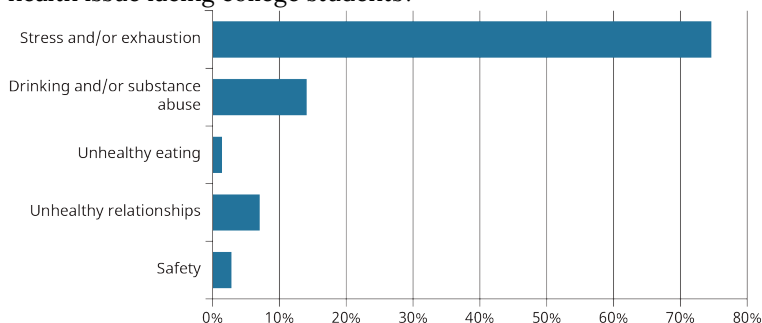


Figure 11.8

Which of the following best describes your experience or outlook regarding healthy eating while in college?

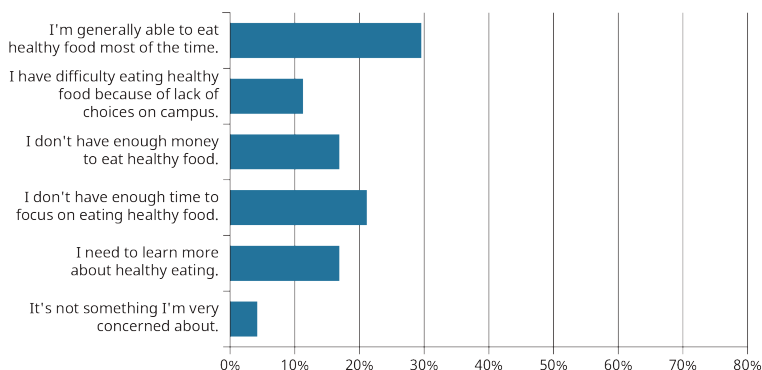


Figure 11.9

When you are facing an issue regarding your emotions, stress, mental health, or relationships, what do you typically do?

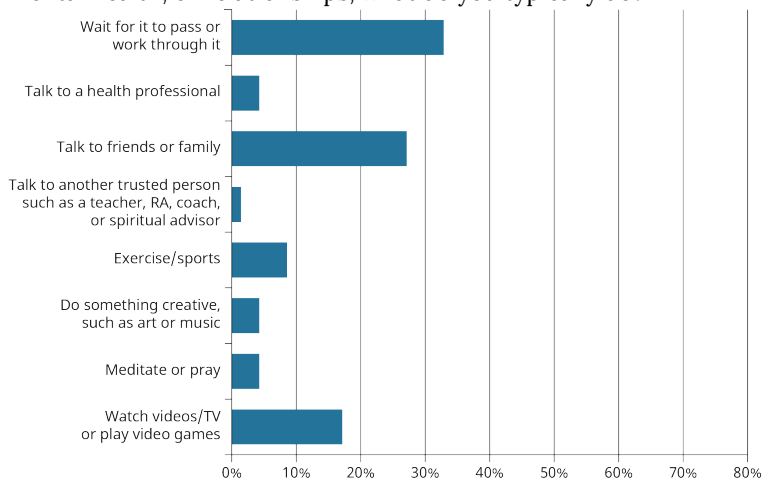


Figure 11.10

What Is Mental Health?

Mental health serves as more than a mere absence of mental disorders; it is an empowering state that equips individuals to effectively navigate life's complexities, actualize their capabilities,

perform meaningful work, and positively impact their communities.¹ This state of well-being is a dynamic interplay of emotional, behavioral, and cognitive facets.

In contrast, a mental disorder disrupts this harmonious state, impeding an individual's ability to function across multiple spheres. The roots of such disorders are often multifactorial, stemming from biological, psychological, social, and environmental influences.² Prevalent categories of mental disorders include mood disorders, anxiety disorders, eating disorders, substance use disorders, and psychotic disorders. A range of treatments exists to manage these conditions, from psychotherapy and medication to self-guided strategies.

Anxiety Disorders

We all experience the occasional feeling of anxiety, which is quite normal. New situations, meeting new people, driving in traffic, and public speaking are just a few of the common activities that can cause people to feel anxious. It is important to seek help when these feelings become overwhelming, cause fear, or keep us from doing everyday activities. Anxiety disorders are the most common mental health concern in the United States, and while there are many types of anxiety disorders, they all have one thing in common: “persistent, excessive fear or worry in situations that are not threatening.”²³ Physically, your heart may race, and you may experience shortness of breath, nausea, or intense fatigue. Talk with

1. American Psychological Association, <https://www.apa.org/topics/mental-health>

2. Ibid.

a mental health care professional if you experience a level of anxiety that keeps you from your regular daily activities.

Eating Disorders

Eating disorders are not uncommon among students. Stress or anxiety may create a desire for some students to overeat, while others may develop a concern about body shape or weight and significantly reduce their food intake.

Anorexia nervosa is a potentially fatal illness marked by self-starvation. People with anorexia usually have an irrational concern about body shape or weight and eat a very restricted diet. They may also feel the need to exercise all the time, even when they are sick or exhausted.

Binge eating is frequent consumption of large amounts of food in a short period of time. People who binge regularly (more than once a week) and feel a lack of control over their eating may have binge eating disorder (BED). It is important to seek treatment if you suspect there is an issue with binge eating. Treatment can address any underlying psychological issues that will help control urges to binge eat.

Bulimia involves cycles of excessive eating followed by eliminating food through vomiting or with laxatives. Eating disorders can lead to many complications, some of them very serious, like heart conditions and kidney failure. It is crucial for anyone with an eating disorder to stabilize their health, then continuing medical care and counseling to reach full recovery. Eating disorders can be treated successfully with medical care, psychotherapy, counseling, or coaching.

If you think you might have an eating disorder, visit a doctor or your local health center. The [National Eating Disorders Association](#) also offers information, help, and support.

Depression

Most people feel sad at times. This is a normal reaction to loss or struggles we face. Being sad is not the same as having depression. When intense sadness lasts for several days or even weeks and you are no longer interested in activities you once enjoyed, it may be depression. Depression can lead to a variety of emotional and physical problems and can decrease a person's ability to function at work and at home.

Depression does not have a single cause. It can follow a life crisis or physical illness, but it can also occur spontaneously. Several factors including trauma, a significant life change, brain injury, and drug and alcohol misuse may contribute to depression. Depression is a treatable medical condition. Talk with a mental health care professional if you experience an ongoing level of sadness that keeps you from your regular daily activities.

Suicidal Behavior

Suicide is when people direct violence at themselves with the intent to end their lives, and they die because of their actions.²⁴

People who contemplate suicide often experience a deep feeling of hopelessness. They often don't feel they can cope with challenging life events and are not able to see solutions to problems. In the moment, they are unable to see that the challenges are really only temporary. Most survivors of suicide attempts go on to live wonderful, full lives.

Depression is a key risk factor for suicide, along with substance abuse, chronic debilitating pain, mental health disorders, and a family history of suicide.

These are some of the warning signs to help you determine if a friend or loved one is at risk for suicide, especially if the behavior is new, has increased, or seems related to a painful event:

- talking about wanting to die or to kill themselves
- looking for a way to kill themselves, like searching online or buying a gun
- talking about feeling hopeless or having no reason to live
- talking about feeling trapped or in unbearable pain
- talking about being a burden to others
- increasing the use of alcohol or drugs
- acting anxious or agitated; behaving recklessly
- sleeping too little or too much
- withdrawing or isolating themselves
- showing rage or talking about seeking revenge
- experiencing extreme mood swings²⁵

Help is available all day, every day, for anyone who is in crisis. By offering immediate counseling to everyone that may need it, crisis centers provide invaluable support at the most critical times. If you or someone you know has warning signs of suicide, get help as soon as possible. Family and friends are often the first to recognize any warning signs and can help take the first step in finding treatment.

If someone is telling you that they are going to kill themselves, do not leave them alone. The [988 Suicide and Crisis Hotline](#) is available 24 hours a day, 7 days a week. You can call or text 988 for free and confidential support for people in distress as well as prevention and crisis resources for you or your loved ones.

Additional Resources

Because entering college is such a big transition, it is important to know what health services are available on your campus. Some help may be beyond the scope of a college counseling program, and if this is the case, your college health center can refer you to off-campus resources to support you.

Regardless of where you attend college, OK2TALK and NAMI offer online, text, and phone support.

- [OK2TALK](#) is a community for young adults struggling with mental health problems. It offers a safe place to talk.
- Call the NAMI helpline at 800-950-6264, or txt NAMI to 741741.
- CWI offers short-term counseling for students through [Crisis Counseling and Wellness Services](#).
- [Pathways Community Crisis Center](#) of Southwest Idaho is a free crisis mental health care center where you can go for help and support 24 hours a day, 7 days per week. Here is their number: [\(208\) 489-8311](tel:(208)489-8311)

Your brain requires a constant supply of energy to function. What you eat and are exposed to have a direct impact on its processes, your mood, and your ability to make good decisions. A majority of college students feel anxious, lonely, or depressed at some point during the year. We all have bad days, and sometimes bad days string into weeks. It's OK to feel bad. What's important is to acknowledge and work through your feelings, and find a friend or a counselor to talk to.

Footnotes

- [22](#)Wikipedia, https://en.wikipedia.org/wiki/Mental_health
- [23](#)NAMI, <https://www.nami.org/NAMI/media/NAMI-Media/Images/FactSheets/Anxiety-Disorders-FS.pdf>
- [24](#)NIMH, <https://www.nimh.nih.gov/health/publications/suicide-faq/index.shtml>
- [25](#)<https://suicidepreventionlifeline.org/how-we-can-all-prevent-suicide/>; <https://www.nimh.nih.gov/health/publications/suicide-faq/index.shtml>

This chapter is derived from *College Success*, “[Taking Care of Your Mental Health](#),” CC-BY 4.0.

39. Maintaining Healthy Relationships

Questions to consider:

- How does self-care benefit relationships?
- Why is community so important to healthy relationships?
- What is sexual health?

Relationships are key to happy and healthy lives. According to Dr. Robert Waldinger, director of the Harvard Study of Adult Development, people with the best health outcomes were people who “leaned into relationships, with family, with friends, with community.”



Figure 11.11 Healthy relationships involve trust, respect, and support. (Credit: Garry Knight / Flickr / Attribution 2.0 Generic (CC-BY 2.0))

The quality of our relationships is important, however. What makes a relationship healthy? Relationships come in many forms: lovers, family, friends, coworkers, team members, and neighbors. Think of

a relationship where you have mutual respect and trust, supporting each other in tough times, celebrating the good times, and communicating with ease and honesty. This is a healthy relationship. Do you have someone in mind? On the other hand, if communication is often tense or strained, confidences are broken, or you don't feel listened to, appreciated, or valued, these are signs of an unhealthy relationship. Unhealthy relationships can have both immediate and longer-term health impacts. If you are unhappy in a relationship, try to improve the relationship, or end it. Do not stay in a relationship for the wrong reasons, such as fear of being alone or guilt.

If a partner tries to force you to do something sexually, harms you physically, or is verbally abusive, you are in an unhealthy relationship. Even if you believe the person loves you, it does not make up for the harm they are doing to you. End the relationship.

Take a moment to assess the health of your relationships. Who are the people who make you smile, who boost your confidence, who truly listen when you need to talk, and who want only the best for you? Investing in these relationships is likely to make you happier and healthier. Relationships are two-way streets. How committed are you to your relationships? How much effort do you put into nurturing your relationships?

Self-Care

Healthy relationships start with healthy individuals. Self-care is learning to take good care of yourself and to prioritize your own needs. Self-care involves any activity that nurtures and refuels you, such as taking a walk in the woods, going to a yoga class, attending a sporting event, reading a good book, or spending time with friends. When you are feeling calm and nourished, you are going to look forward to your day, and despite how busy it is, you will prioritize time with friends and family. If you don't take care of and learn to

love yourself, you will never be able to bring your best self to any relationship.

An important dynamic you bring to any relationship is how you feel about yourself. Self-esteem is about loving yourself and being happy for who you are. Building healthy self-esteem impacts how you see yourself, which can drastically improve your relationships. While low self-esteem won't keep us from romantic love, it can act as a barrier to a healthy relationship. If you do not believe you are good enough, how can you expect your partner to think so?

When you feel secure in yourself, this allows you and your partner to feel more secure about the relationship. If you have insecurities, it may show in your relationship as jealousy, defensiveness, or tension that leads to unnecessary arguments. Healthy self-esteem goes hand in hand with self-confidence, and feeling confident about yourself will translate into a stronger and more satisfying relationship. If you are experiencing low self-esteem, you may give your partner too much credit or stay in a relationship that is not healthy for you. If you find yourself changing your personality for someone else, that is never a sign of a healthy relationship.

You can reverse negative self-talk and build your self-esteem. If you catch yourself thinking you are unlovable, unattractive, or not good enough, it's important to start talking to yourself in a positive way and to celebrate all that is uniquely you.

Self-care includes self-forgiveness. We all make mistakes. A misstep isn't the end of the world. Pick yourself up, put things in perspective, acknowledge any lessons to be learned, focus on all that makes you special, and move forward. Be kind to yourself.

The Importance of Community

The Nicoya Peninsula in Costa Rica is home to some of the highest number of centenarians (people who are 100 years old or older) in the world. Costa Ricans in general report a high level of life

satisfaction. Dan Buettner, author of the Blue Zones study of the longest living populations in the world, explains that Costa Rica “is a place where religion, family, and social interaction are the main values, unlike trying to get ahead, or financial security, or status. Their cities are set up so they’re bumping into each other all day long. They walk to the markets, where they have conversations with people.”²⁶

In Costa Rica, multiple generations live together under the same roof or nearby where they can be involved in each other’s lives. Neighbors are like extended family, and people often stop in for a visit and go out of their way to help one another.

While this isn’t the way many of us live in the United States, the lessons from the Blue Zone study underscore the importance of community and the health benefits of connecting to and staying close to a community. What communities do you belong to? The people you live with? A sports team? A club or people you volunteer with? When you start seeing the social circles you connect to as communities and prioritize your time to develop more closeness with those communities, you will experience many physical, mental, and emotional health benefits.



Figure 11.12 Joining clubs in college can be an outstanding way to

join and build communities. (Credit: SupportPDX, Cerritos College / Flickr / Attribution 2.0 Generic (CC-BY 2.0))

According to an analysis of research on college students (Joe Cuseo, *The Most Potent, Research-Based Principles of College Success*), college students who have a higher sense of belonging and are more involved in their college community are more successful. Additionally, college students who are involved in extracurricular, volunteer, and part-time work experiences outside the classroom (less than 20 hours per week) earn higher grades than students who do not get involved in any out-of-class activities at all.

APPLICATION

Make a list of the communities you belong to. Your list should include formal communities—for example, sports teams, fraternities or sororities, and membership in clubs and other organizations. Your list should also include informal communities—for example, your neighbors or the people you always see at your favorite exercise class.

Next to each community, write how being a member of this community benefits you and how your involvement benefits the community. Now, make a new list of your personal interests and passions. How well do these align with the communities you already belong to? Are there new communities that would be a good fit for you?

If you are struggling to identify communities you already belong to, think about your passions, causes you care about, and ways you love to spend your time. Find a group or club that aligns with your interests. If you can't find one that already exists, start a new club!

Research has shown that friends provide a sense of meaning or purpose in our lives, and that having a healthy social life is important to staying physically healthy. In a meta-analysis of the research

results from 148 studies of over 300,000 participants, researchers found that social relationships are important in improving our lifespan. Social support has been linked to lower blood pressure and better immune system functioning. The meta-analysis also showed that social support operates on a continuum: the greater the extent of the relationships, the lower the health risks.²⁷

According to a 2018 report from the American College Health Association, in a 12-month period, 63 percent of college students have felt very lonely. If you are feeling lonely or having a hard time making friends, know that the majority of people around you have also felt this way. Joining a group or a club of people who share your interests and passions is one of the best ways to make great friends and stay connected.

Sexual Health

Affection, love, and sexual intimacy all play an important role in healthy relationships, and a responsible approach to intimacy is essential for sexual health. Whether you are already sexually active or become sexually active in the future, your choices can affect your safety as well as the health and safety of your sexual partners. It's important to understand what you can do to protect yourself from sexually transmitted infections (STIs).

Common Sexually Transmitted Infections

Infection	Symptoms	Diagnosis and Treatment
Human papillomavirus (HPV)	<ul style="list-style-type: none"> • HPV can be passed even when an infected person has no signs or symptoms. • Most people with HPV do not know they are infected. • Symptoms can include genital warts, abnormal Pap test results, and cancer. 	<ul style="list-style-type: none"> • There is no test for HPV. • There is a vaccine to prevent it. • There is no treatment for HPV, although there are treatments for the health problems it can cause. • Routine Pap tests can identify problems.
Chlamydia	<ul style="list-style-type: none"> • Symptoms include a burning sensation when urinating and/or discharge from the penis or vagina; however, most people who have chlamydia have no symptoms. • In women, it can cause damage to the reproductive system. 	<ul style="list-style-type: none"> • Testing usually involves a urine sample or vaginal swab. • It can be cured with the right treatment.
Genital herpes	<ul style="list-style-type: none"> • Genital herpes is caused by two types of viruses, herpes simplex type 1 and herpes simplex type 2. • The virus can be released through sores or through the skin even when sores are not visible. • Get examined by your doctor if you notice an unusual sore, a smelly discharge, or burning when urinating. 	<ul style="list-style-type: none"> • It can be diagnosed through the symptoms, testing a sample from the sore(s), or a blood test. • There is no cure for herpes; however, there are medicines that can prevent or shorten outbreaks.

Infection	Symptoms	Diagnosis and Treatment
Gonorrhea	<ul style="list-style-type: none"> Symptoms can include a burning sensation when urinating, abnormal discharge from the penis or vagina, and bleeding between periods. Rectal infection symptoms include itching, burning, and bleeding. 	<ul style="list-style-type: none"> Get examined by your doctor if you or your sexual partner notice any of these symptoms. Testing is usually a urine sample and possibly a throat or rectum swab. It can be cured with the right treatment. Medication will stop the infection, but it will not undo any permanent damage caused by the disease.
Human immunodeficiency virus (HIV)	<ul style="list-style-type: none"> HIV damages the body's immune system cells. The most advanced stage of HIV infection is commonly referred to as AIDS (acquired immunodeficiency syndrome). It most often spreads through fluid exchange via unprotected sex or by sharing drug needles with an infected person. Women can pass HIV to their babies during pregnancy or childbirth. 	<ul style="list-style-type: none"> Medications such as pre-exposure prophylaxis (PrEP) can reduce risk when taken consistently and with other prevention measures. People can live with the disease for many years, especially if they are diagnosed and treated early. Early diagnosis is also important to reduce the risk of transmitting HIV to others.

Table 11.1 STI data, symptoms, diagnosis, and treatment information courtesy of Centers for Disease Control and Prevention,

How You Can Protect Yourself against STIs

For the most certain protection against STIs, abstinence—avoiding any form of vaginal, anal, or oral sex—is your most definitive safeguard. That said, if you are contemplating sexual activity, thoughtful preparation is crucial. Ensure both you and your partner undergo testing and adhere consistently to condom usage. Condoms remain necessary until both parties have clear test results, are engaged in mutual monogamy, and employ alternative methods for birth control. Mutual monogamy refers to a shared agreement to exclusively engage in sexual activity with one another, providing a layer of protection against STIs, given that both parties are verified to be STI-free. Resourceful tools for locating confidential STI testing locations are [readily available online](#).

Engage in an open dialogue with your partner about strategies for STI and pregnancy prevention before commencing sexual activity. Being ready for sexual encounters signifies readiness to guard your well-being and long-term health. Clearly establish boundaries and activities that you are comfortable with; your partner should unequivocally respect your ability to decline any actions that make you uneasy. In all scenarios, consent and mutual respect are non-negotiable prerequisites.

Prompt consultation with a healthcare provider is vital should you discover you have an STI. Openness about your STI status with your partner, although potentially awkward, is essential. Such candor enables your partner to make well-informed decisions that protect their health as well.

Footnotes

- [26](https://www.bluezones.com/2017/10/costa-rica-singapore-two-happiest-places-earth/)<https://www.bluezones.com/2017/10/costa-rica-singapore-two-happiest-places-earth/>
- [27](https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000316)Holt-Lunstad, *PLoS Medicine*, <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000316>

PART IX
INTRODUCTION TO
RESEARCH

40. Research Skills in the Workplace: A Brief Overview

In most of your college courses, you will be asked to research topics so that you can learn more about them. But the same research skills you are practicing in your classes are also critical to success in the workplace. Here are some general ways that you may use research in your future career, regardless of your pathway:



Photo by [UX Indonesia](#) on [Unsplash](#)

1. **Decision-making:** Research skills are crucial for making informed decisions. In any workplace, there are always decisions to be made, and having the ability to research and analyze information can help you make more informed choices.
2. **Problem-solving:** Research skills are also important for problem-solving. When faced with a problem, it is essential to be able to gather and analyze information to come up with the best possible solution.
3. **Innovation:** Research skills can also lead to innovation in the workplace. By researching new ideas and technologies, you can help your organization stay ahead of the competition and be more innovative.
4. **Credibility:** In many industries, credibility is crucial. Research skills can help you establish credibility by demonstrating your ability to gather and analyze information accurately and effectively.
5. **Continuous learning:** Research skills are also important for

continuous learning. In today's fast-paced work environment, it is essential to keep up with new developments in your industry, and research skills can help you do that.

As you can see, research skills are an essential part of many jobs and can help you make better decisions, solve problems, innovate, establish credibility, and keep up with new developments in your industry. You can and should showcase your research skills on your resume, and you should take as many opportunities as possible to practice these skills.

An article from the employment website [GlassDoor.com](https://www.glassdoor.com) notes several important skillsets we've already learned about that are important to successful research in the workplace. These skills include:

- **Time Management:** From meeting deadlines to decision making to managing stress, time management skills will help you to manage projects and tasks that require research.
- **Critical Thinking:** Being open to new ideas and having the ability to evaluate them will make you a more effective workplace researcher.
- **Problem Solving:** The ability to be an active listener and to communicate effectively will help you to use research to solve problems in your workplace.

This video goes over some ways to refine your Google searches so that you can get better results:



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=170#oembed-1>

Knowledge Check

When you are researching something related to your career, what are some red flags you may find with sources? How do you know if a source is credible and reliable? Investigate the kinds of research you might need to do as part of your future career. You might be able to find this information from a Google search, descriptions from online job postings, or a conversation with someone in that field. Spend some time and try to get a solid idea of the kinds of topics you might need to research and what research tools you might use. Make notes of the information from the article and the results of your research.

Now that we've thought about research skills more broadly, let's consider some specific ways research can be used in a variety of fields. If you're not sure what you plan to study yet, look through all the options to see if one of them speaks to you.

Research in STEM

STEM researchers study a wide range of topics that fall under the categories of science, technology, engineering, and mathematics. Some of the areas of study include:

1. **Biology:** researchers in this field study living organisms, including cells, genetics, and ecosystems.
2. **Chemistry:** researchers in this field study the composition,

properties, and reactions of matter.

3. **Physics:** researchers in this field study the properties and behavior of matter and energy.
4. **Mathematics:** researchers in this field study abstract concepts such as numbers, quantity, and structure.
5. **Engineering:** researchers in this field apply scientific and mathematical principles to design and build new products, systems, and structures.
6. **Computer Science:** researchers in this field study computation, algorithms, programming, and artificial intelligence.
7. **Environmental Science:** researchers in this field study the natural environment, including its ecosystems, biodiversity, and sustainability.
8. **Materials Science:** researchers in this field study the properties and behavior of materials, including metals, polymers, and ceramics.
9. **Astronomy:** researchers in this field study celestial objects, including planets, stars, and galaxies.

Some websites that may help you with your STEM research include:

- [NASA](#)
- [National Institutes of Health](#)
- [National Science Foundation](#)
- [Society for Industrial and Applied Mathematics](#)
- [CWI Library Biology LibGuide](#)
- [CWI Library Math LibGuide](#)

Research in Social Sciences

Social scientists study a wide range of phenomena related to human

behavior and social interactions. Some of the main areas of study within social sciences include:

1. **Sociology:** the study of human society, social structures, and social interactions.
2. **Psychology:** the scientific study of behavior and mental processes, including perception, cognition, emotion, and motivation.
3. **Education:** the study of how people learn and how to improve the teaching process.
4. **Anthropology:** the study of human cultures, societies, and behavior across time and space.
5. **Economics:** the study of how individuals, organizations, and societies allocate resources and make decisions about production, consumption, and distribution.
6. **Political science:** the study of politics, government, and political behavior at local, national, and international levels.
7. **Geography:** the study of the relationships between people and their physical and social environments.

Social scientists use a range of research methods and tools to study these phenomena, including surveys, experiments, observations, and statistical analysis of data. They may also use interdisciplinary approaches that combine multiple fields of study to gain a more comprehensive understanding of complex social phenomena. Ultimately, social scientists aim to generate new knowledge and insights that can inform policies, practices, and interventions that improve people's lives and well-being.

Some websites that may help you with your social science research include:

- [Social Sciences Research Network \(SSRN\)](#)
- [Educational Research Information Center \(ERIC\)](#)
- [National Institutes of Mental Health](#)
- [Substance Abuse and Mental Health Services Administration](#)

[\(SAMHSA\)](#)

- [National Institute of Justice](#)
- [Federal Bureau of Investigations \(FBI\)](#)
- [National Archives](#)
- [CWI Criminal Justice LibGuide](#)
- [CWI History LibGuide](#)
- [CWI Psychology LibGuide](#)
- [CWI Sociology LibGuide](#)

Medical Research

Medical researchers investigate a wide range of subjects related to human health and disease. Some of the most common subjects investigated by medical researchers include:

1. **Basic science research:** This includes research on the fundamental aspects of human biology and physiology, such as genetics, molecular biology, and cellular biology.
2. **Clinical research:** This involves studying the effectiveness and safety of medical treatments and interventions, as well as the development of new diagnostic tools and therapies.
3. **Epidemiology:** This field focuses on studying the distribution, determinants, and patterns of health and disease in populations.
4. **Health services research:** This involves investigating the organization, delivery, and financing of healthcare systems, with the goal of improving healthcare quality and reducing costs.
5. **Behavioral and social sciences:** These fields focus on understanding the psychological, social, and cultural factors that influence health behaviors and outcomes.
6. **Public health:** This involves studying the health of populations and the prevention of disease through public health policies

and interventions.

Overall, medical research covers a broad range of subjects, and the field is constantly evolving as new technologies and approaches are developed.

Some websites that may help you with your health sciences/medical research include:

- [National Institutes of Health](#)
- [U.S. Centers for Disease Control](#)
- [Journal of the American Medical Association \(JAMA\)](#)
- [Library of Congress Research Guides \(Medicine\)](#)

Business Research

Researchers in business investigate a wide range of topics related to various aspects of the business world. Some examples of the areas that business researchers might focus on include:

1. **Marketing:** Researchers might study consumer behavior, market trends, advertising strategies, and brand management.
2. **Management:** Researchers might investigate topics such as leadership, organizational behavior, human resource management, and operations management.
3. **Finance:** Researchers might explore topics such as financial markets, investment strategies, and corporate finance.
4. **Entrepreneurship:** Researchers might study topics related to starting and growing new businesses, such as innovation, business models, and venture capital.
5. **International business:** Researchers might investigate topics related to global markets, international trade, and cross-cultural management.
6. **Information systems:** Researchers might explore topics

related to the design, development, and management of information systems and technologies in businesses.

7. **Corporate social responsibility:** Researchers might investigate topics related to sustainability, ethical business practices, and corporate social responsibility.

Overall, the field of business research is broad and interdisciplinary, and researchers may draw on theories and methods from economics, psychology, sociology, and other fields to investigate a wide range of topics.

Some websites that may help you with your business research include:

- [Library of Congress Business Research Guide](#)
- [Statista](#)
- [New York Stock Exchange](#)
- [Securities and Exchange Commission](#)
- [Business Case Studies Resources from Sheridan College](#)
- [Entrepreneur.com](#)
- [CWI Business LibGuide](#)

In the next chapter, we will learn more about research questions and how to come up with important questions that you want to answer.

This chapter was developed with assistance from ChatGPT Version 3.5. I used ChatGPT to develop preliminary outlines and to suggest definitions, which I then checked and enhanced. I accessed ChatGPT on April 20-23, 2023 to assist with content creation for this chapter. For more information about the specific chats, please see [“Notes on ChatGPT, Research, and Academic Integrity”](#)

4I. What Is a Research Question?

Most research, both in college and in the workplace, starts with a research question. A research question is a clear and concise statement that identifies the focus of a research project and provides a direction for the research process. It is the fundamental question that the researcher aims to answer through their study.



Photo by [Emily Morter](#) on [Unsplash](#)

A research question should be specific, well-defined, and answerable based on available evidence. It should be grounded in a clear understanding of the existing literature and should address a gap or limitation in current knowledge or practice. It should also be feasible and realistic in terms of the scope and resources available for the research project.

A good research question should be relevant, interesting, and meaningful to the researcher and the intended audience. It should be formulated in a way that allows the researcher to collect and analyze data that will help to answer the question and advance understanding in the field.

Examples of research questions include the following:

- What is the relationship between physical exercise and mental health in older adults?
- What are the factors that influence the adoption of renewable energy technologies in developing countries?
- How does gender affect leadership styles and outcomes in the workplace?

- What is the impact of social media on body image and self-esteem in young adults?

Knowledge Check

Have you ever developed a research question for an assignment in a class? What about in the workplace? What concerns do you have about developing good research questions?

Overall, a research question is a critical component of the research process, as it helps to guide the design, implementation, and analysis of the study and ensures that the research project is focused and meaningful. What kinds of research questions interest you? What are some topics that are currently being researched in your future career?

Watch this short video for tips on how to develop a good research question:



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=178#oembed-1>

In the next chapter, we will learn more about research methods we

can use to answer research questions, both in school and in the workplace.

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42. Primary Research and Research Methods

When you are curious about something, how do you learn new things? Maybe you Google the subject or post a question in an online community. Or maybe you research your question in a library to find credible, high-quality sources. Or maybe, depending on your question, you survey your friends for their opinions or interview people who may know more about the subject than you do.



Photo by [Kaleidico](#) on [Unsplash](#)

Working with existing written sources is called secondary research. Primary research involves collecting information yourself.

What is Primary Research?

[Primary research](#) is the process of collecting original data and information directly from the source or subject being studied. It involves conducting new research, often with a specific research question or objective in mind. Primary research can take various forms such as surveys, interviews, experiments, observations, and focus groups. This type of research can be used to gather both qualitative and quantitative data and can be conducted in a variety of settings, including in the field or in a laboratory. The data collected through primary research is often used to inform decision-making, develop new products or services, or further academic research.

Knowledge Check

Primary research skills are useful in every career. Think about a job that you have worked at or a future job that you would like to have. What are some questions that might come up in your job? How could you use primary research to answer those questions?

As you progress in your academic studies, you'll encounter some new approaches to primary research. Qualitative and quantitative research are both used in a variety of fields to answer research questions. The scientific method, which you may have learned in high school, is also an important approach to learning and testing knowledge. What follows is a brief overview of these three research methods.

What is Qualitative Research?

What can we learn from people? Qualitative research is a method of inquiry that focuses on exploring and understanding the subjective experiences and perspectives of individuals or groups. It involves collecting and analyzing data in the form of words, images, or other non-numerical forms, and seeks to uncover deeper insights into the meaning and context of human behavior and social phenomena.

Qualitative research methods include interviews, focus groups, observations, and document analysis. These methods allow researchers to gather rich and detailed information about people's

attitudes, beliefs, values, and experiences, and to gain an in-depth understanding of complex social processes and relationships.

Qualitative research is used in a wide range of fields, including social sciences, psychology, education, healthcare, business, and marketing. It can be used to explore a variety of research questions, such as:

- How do people experience and cope with chronic illness?
- What are the factors that influence students' academic achievement?
- What are the barriers to effective communication in healthcare?
- How do consumers perceive and respond to advertising messages?

Qualitative research is particularly useful when the research question involves exploring the meanings and interpretations that people give to their experiences, or when the research context is complex and multifaceted. It can also be used to generate hypotheses and ideas for further research, and to inform the development of interventions or policies that are more responsive to people's needs and perspectives.

What is Quantitative Research?

What can we learn from data? Quantitative research is a method of inquiry that focuses on collecting and analyzing numerical data to answer research questions and test hypotheses. It involves the use of statistical analysis to draw objective and generalizable conclusions about populations and phenomena.

Quantitative research methods include surveys, experiments, and statistical analysis of secondary data. These methods allow researchers to measure and quantify variables, such as attitudes,

behaviors, and outcomes, and to test the relationships between them.

Quantitative research is used in a wide range of fields, including social sciences, psychology, education, healthcare, business, and marketing. It can be used to explore a variety of research questions, such as:

- What is the prevalence of a particular health condition in a population?
- What is the effect of a new medication on patient outcomes?
- What is the relationship between socio-economic status and educational attainment?
- What is the impact of advertising on consumer behavior?

Quantitative research is particularly useful when the research question involves measuring and comparing variables, or when the research context is relatively straightforward and can be operationalized in terms of numerical data. It can also be used to inform evidence-based policies and interventions that are more effective and efficient in achieving desired outcomes.

What is the Scientific Method?

What can we learn from testing a hypothesis? The scientific method is a systematic approach to acquiring knowledge and understanding of the natural world through empirical observation, experimentation, and analysis. It is a set of guidelines that scientists follow to ensure the accuracy, reliability, and reproducibility of their findings. The scientific method typically involves the following steps:

1. **Observation:** Scientists observe and describe a phenomenon in the natural world, gathering as much data as possible.

2. **Question:** Based on their observations, scientists form a question that they want to answer through their research.
3. **Hypothesis:** Scientists propose a hypothesis, which is a testable explanation for the observed phenomenon.
4. **Prediction:** Scientists use the hypothesis to make predictions about what should happen in future experiments or observations.
5. **Experimentation:** Scientists design and conduct experiments to test their hypothesis and collect data.
6. **Data analysis:** Scientists analyze the data they have collected to determine whether their hypothesis is supported or not.
7. **Conclusion:** Based on their analysis, scientists draw conclusions about their hypothesis, and communicate their findings to the scientific community.
8. **Replication:** Other scientists attempt to replicate the experiment and confirm or refute the initial findings.

This process is iterative, meaning that scientists may repeat certain steps or modify their approach based on new observations or data. Through this process of experimentation and analysis, scientists are able to make increasingly accurate and reliable observations about the natural world.

Knowledge Check: Qualitative or Quantitative?

Think back to what you have already learned about the types of research questions that are common in your field. Which type of primary research—qualitative or quantitative—do you think you'll most often use in your future workplace? Can you think of some examples of

research questions that you might use primary research to answer?

We've just scratched the surface when it comes to research methods. If you are interested in learning more, check out this Creative Commons licensed textbook: [Social Science Research: Principles, Methods, and Practices](#) by Anol Bhatthercherjee. In your major, you may take a research methods course that focuses on the types of research done in your field. Here are some examples of courses at CWI (taken from the [CWI 2023/2024 Catalog](#)):

PSYC 190 Writing for the Social Sciences (3 Credits, Fall/Spring)

This course is for students majoring in the social sciences, in order to teach an understanding of scientific reading and writing. Upon completion of this course, students will be better prepared for future writing and research intensive courses within their major. An emphasis will be placed on collaboration, information literacy, comprehension, synthesis of empirical research, and the use of APA style to document and write. PREREQ: [ENGL 101](#) or equivalent placement score. (3 lecture hours, 0 lab hours, 3 credits)

SCIE 225 Essential Principles of Scientific Research
(1 Credit, Varies)

This course is designed for Biology and Chemistry majors who have an interest in Biomedical Research. The course will serve as a prerequisite for participation in the CWI INBRE Summer Research Fellowship and will also benefit any student who hopes to engage in scientific research during their academic or professional career. This course will allow students to explore research conducted by local scientists; students will read and discuss scientific journal articles and attend presentations by research scientists. The culmination of the course will be the completion of a research fellowship application. This course meets for the equivalent of one

contact hour per week. There are no prerequisites, except an interest in scientific research. (1 lecture hours, 0 lab hours, 1 credits)

ENGL 211 Literary Analysis (3 Credits, Fall/Spring)

This course refines literary analysis skills with emphasis on critical approaches and methods. Students will learn techniques in literary research and apply researched, critical perspectives to a variety of texts. PREREQ: [ENGL 102](#), [ENGL 190](#), [ENGL 191](#), or PERM/INST. (3 lecture hours, 0 lab hours, 3 credits)

PHIL 211 Philosophical Writing (3 Credits, Spring)

This course provides a detailed examination of a small number of focused philosophical topics, with an emphasis on improving students as readers and writers of philosophical texts and developing their ability to communicate philosophical ideas in formal academic writing supported by research. (3 lecture hours, 0 lab hours, 3 credits)

HIST 190 Introduction to the Study of History (3 Credits, Fall/Spring)

Using a major historical theme as a foundation, students will examine the philosophy of history, historiography, and methods of historical research. One component of the course will be researching and writing a historical paper. The historical content of the course will vary. Required of all History majors. (3 lecture hours, 0 lab hours, 3 credits)

CRIJ 190 Writing for Criminal Justice (3 Credits, Fall)

This course is for Criminal Justice majors who want to gain a more in-depth understanding of the technical writing that is commonly used in the criminal justice field. Upon completion of this course, students will be better prepared for future writing opportunities within their major, as well as writing demands of the workplace.

PREREQ: [ENGL 101](#) or equivalent placement score. PRE/
COREQ: [ENGL 102](#) or equivalent placement score. (3 lecture hours, 0
lab hours, 3 credits)

SOC 280 Sociological Research

(3 Credits, Fall)

This course is an introduction to the design of sociological research methods and the systematic analysis of social data. Students will learn how to move from a general question to formulate a researchable question with measurable hypotheses as well as how to design and execute a research project. This course will cover quantitative and qualitative methodological and analytical techniques used in sociology. Students will confront the conceptual and ethical issues encountered while conducting sociological research. (3 lecture hours, 0 lab hours, 3 credits)

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43. Notes on ChatGPT, Research, and Academic Integrity

LIZA LONG

[ChatGPT](#) is a large language learning model that was introduced to the public in November 2022. This tool can be [useful in research](#), but it must be used with caution and should not replace your own work or ideas. Some ways I encourage my own students to use ChatGPT in their research and writing include the following:



Photo by [Hitesh Choudhary](#) on [Unsplash](#)

1. Outlining a paper
2. Refining a research question
3. Learning more about basic terms/definitions (Wikipedia can also be a good resource for starting your research, though you should not use Wikipedia as a cited source)
4. Proofreading written work for grammar and syntax

However, you have to be careful with this technology. It sometimes lies (also called [“hallucination”](#)). It can reveal cultural biases. And it frankly lacks the creativity and “human” touch that makes academic work truly excellent.

When my students use ChatGPT, I ask them to include a [citation](#) to this tool and also to provide a brief reflection about how they used ChatGPT and how they checked the information for accuracy.

According to the American Psychological Association (APA), ChatGPT should be cited like this:

When prompted with “Is the left brain right brain divide real or a metaphor?” the ChatGPT-generated text indicated that although the two brain hemispheres are somewhat specialized, “the notation that people can be characterized as ‘left-brained’ or ‘right-brained’ is considered to be an oversimplification and a popular myth” (OpenAI, 2023).

Reference

OpenAI. (2023). *ChatGPT* (Mar 14 version) [Large language model]. <https://chat.openai.com/chat>

Chat GPT includes the ability to share links to specific chats. It's a best practice to include those links in your reference. For other tools like Google Doc's Writing Assistant, links are not yet available, so it's important to be transparent with your reader about how and when you are using AI in your writing.

It's also important to remember that not all instructors allow students to use ChatGPT. You should check with your individual instructor for their policies. At CWI, the official academic integrity policy, including the use of ChatGPT and other AI assistance, is as follows:

“Practicing academic integrity includes, but is not limited to, non-participation in the following behaviors: cheating, plagiarism, falsifying information, unauthorized collaboration, facilitating academic dishonesty, collusion with another person or entity to cheat, submission of work created by artificial intelligence tools as one's own work, and violation of program policies and procedures.” (CWI Syllabus Template, 2023).

To show you how ChatGPT can be useful in the research and writing process, I used ChatGPT 3.5 in creating some of the content in this part of your textbook. I have included an example screenshot from a chat below. Note: I did not use ChatGPT to recommend

any sources or websites because it often provides fictional sources rather than real ones.

I have copied and pasted the prompt and response [below](#).

Prompt: What is qualitative research, and how is it used?

Response: Qualitative research is a method of inquiry that focuses on exploring and understanding the subjective experiences and perspectives

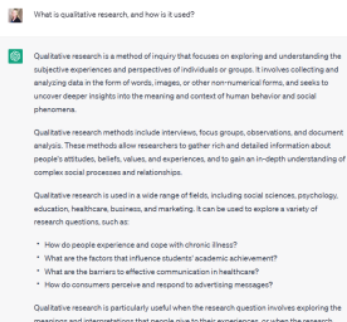
of individuals or groups. It involves collecting and analyzing data in the form of words, images, or other non-numerical forms, and seeks to uncover deeper insights into the meaning and context of human behavior and social phenomena.

Qualitative research methods include interviews, focus groups, observations, and document analysis. These methods allow researchers to gather rich and detailed information about people's attitudes, beliefs, values, and experiences, and to gain an in-depth understanding of complex social processes and relationships.

Qualitative research is used in a wide range of fields, including social sciences, psychology, education, healthcare, business, and marketing. It can be used to explore a variety of research questions, such as:

- How do people experience and cope with chronic illness?*
- What are the factors that influence students' academic achievement?*
- What are the barriers to effective communication in healthcare?*
- How do consumers perceive and respond to advertising messages?*

Qualitative research is particularly useful when the research question involves exploring the meanings and interpretations that



people give to their experiences, or when the research context is complex and multifaceted. It can also be used to generate hypotheses and ideas for further research, and to inform the development of interventions or policies that are more responsive to people's needs and perspectives (OpenAI, 2023).

Reference

OpenAI (2023). ChatGPT (Feb version) [Large Language Model]. <https://shareg.pt/GkQN6za>

Knowledge Check: Prompt Engineering

Many career and employment experts believe that prompt engineering for large language models like ChatGPT is becoming a highly valued job skill. As start-up specialist Gunjan Karan notes, “These technologies can be likened to a parrot, capable of reciting the perfect poem for you, but only if you give the right instructions.”

Karan walks you through an exercise of locating a job in your field, then using prompt engineering to write a draft of a cover letter to apply for that job. Locate a current job posting for a position in your future career field and try this exercise for yourself. How does providing more specific information change the results that ChatGPT gives you?

Reference

Karan, G. (2023, February 16). *Prompt engineering: The game-changing skill you need to master in 2023!* Linked In. <https://www.linkedin.com/pulse/prompt-engineering-game-changing-skill-you-need-master-gunjan-karun/>

PART X

DIGITAL TOOLKIT

Welcome to our Digital Toolkit section! This part of the textbook is designed to equip you with the essential digital skills necessary for both academic success and professional development. In today's digital age, proficiency in software tools like PowerPoint for presentations and Excel for data management is absolutely critical.

This section offers support around digital tools such as Microsoft 365 products, including the creation, management, and optimization of powerful presentations. As technology evolves, so will this section, preparing you to confidently navigate and master the digital tools of tomorrow. By the end of this journey, you'll not only have a robust set of skills but also the ability to adapt and expand your digital toolkit as needed.

44. PowerPoint Basics

Below are some YouTube videos to help with getting started on your PowerPoint.

PowerPoint Tutorial for Beginners



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=274#oembed-1>

Tips for Creating a Compelling Presentation



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://cwi.pressbooks.pub/pathwaystocollegesuccess/?p=274#oembed-2>

Links to Resources

- [PowerPoint for Windows](#)
- [PowerPoint for Mac](#)

PART XI

ARTIFICIAL INTELLIGENCE (AI) IN COLLEGE

We're including this section on "AI in College" because it's clear that generative AI (GenAI) tools, including platforms such as ChatGPT, are beginning to transform what student workflows and class instruction looks like in higher education. This emerging technology is reshaping what it means to be a student *and* professional, and yet we're at a rather messy stage right now with little consensus on how these tools should be used—or whether they should be used at all. Some students and faculty actively avoid GenAI in the classroom. Others are not yet familiar with the wide range of tools and capabilities available to students and instructors. And some are embracing these new tools and actively experimenting with them.

Regardless of how you are currently using or not using AI in your classroom, all of us are feeling the impact.

The purpose of this section

This guide does not offer suggestions for how students or educators *should* use large language models (LLMs)—such as ChatGPT, Google Gemini, Microsoft Co-Pilot or Anthropic's. As faculty ourselves, we understand the need to slow down and consider new tools critically. A deliberate and critical approach to generative AI is particularly important, since tools such as ChatGPT struggle with accuracy and hallucination, foster bias and censorship, and can easily become a substitute for thinking.

However, we do provide a chapter that offers guidance on ethical considerations and how to adhere to your classroom's academic

integrity policy. At this moment, most colleges are developing guidance or policies around AI use in the classroom. In addition, instructors at CWI have careful wording in their course syllabus about what constitutes acceptable vs. non-acceptable uses of AI. Students should become familiar with their institution's and instructor's AI policies as they navigate the AI landscape.

At the College of Western Idaho, school syllabi now include the following language:

Practicing academic integrity includes, but is not limited to, non-participation in the following behaviors: cheating, plagiarism, falsifying information, unauthorized collaboration, facilitating academic dishonesty, collusion with another person or entity to cheat, submission of work created by artificial intelligence tools as one's own work, and violation of program policies and procedures.

Students must understand how their specific “working with AI” practices relate to this institutional expectation and their classroom's syllabus policy. For example, how should Quillbot's paraphrasing and co-writing capabilities be classified? Should students be allowed to use Grammarly (or even Word's built in grammar checker) to correct their grammar and syntax? This section will provide an overview of what AI-assistance looks like and guidance on how to navigate those kinds of issues.

This section includes the following chapters:

- [How Large Language Models \(LLMs\) like ChatGPT Work](#)
- [How to Prompt AI Chatbots](#)
- [Getting Started with AI Platforms](#)
- [Principles for Using AI in the Classroom](#)

Note about updates to this textbook section

The practice of working with AI is evolving rapidly. As soon as this section is published, it will be somewhat outdated. The affordance of OER, however, allows us to update this textbook more frequently than a traditional textbook. We intend to regularly maintain this section and will update on a semester-by-semester basis.

45. How Large Language Models (LLMs) like ChatGPT Work

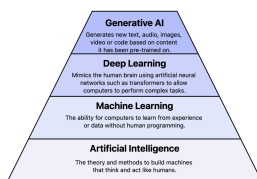
JOEL GLADD

This chapter will introduce students to the basics of large language models (LLMs) and generative AI (GenAI). It's written for someone who has no familiarity with machine learning. By the end of this chapter, students will learn:

- the difference between human-centered writing and machine-generated text;
- how Large Language Models (LLM) are trained and aligned;
- the limitations and risks associated with LLMs, especially bias, censorship, and hallucinations.

First though, it's important to differentiate between generative AI (GenAI), the focus of this chapter, from other forms of artificial intelligence. The chart below shows where GenAI sits in relation to other forms of AI. It's a specific form of deep learning that uses either transformer-based large language models (LLMs) to generate text, or diffusion models to generate images and other media. Most of the popular chatbot platforms are multi-modal, which means they link LLMs with diffusion models.

Students may be familiar with tools such as Quillbot and Grammarly. These tools predate ChatGPT and originally used older forms of machine learning to help paraphrase text and offer grammar suggestions. Recently, however, Grammarly has incorporated GenAI into its tools.



*Fig. 1.
Diagram
showing
the
various
forms
of
AI.*

Human vs. Machine-Centered Model of Writing

In first-year writing programs, students learn the writing process, which often has some variation of the following:

- Free write and brainstorm about a topic.
- Research and take notes.
- Analyze and synthesize research and personal observations.
- Draft a coherent essay based on the notes.
- Get [usually human] feedback.
- Revise and copy-edit.
- Publish/submit the draft!

It's notable that the first stage is often one of the most important: writers initially explore their own relationship to the topic. When doing so, they draw on prior experiences and beliefs. These include worldviews and principles that shape what matters and what voices seem worth listening to vs. others.

Proficient and lively prose also requires something called “rhetorical awareness,” which involves an attunement to elements

such as genre conventions. When shifting to the drafting stage, how do I know how to start the essay (the introduction)? What comes next? Where do I insert the research I found? How do I interweave my personal experiences and beliefs? How do I tailor my writing to the needs of my audience? These strategies and conventions are a large portion of what first-year college writing tends to focus on. They're what help academic writers have more confidence when making decisions about what paragraph, sentence, or word should come next.

In short, a human-centered writing model involves a complex overlay of the writer's voice (their worldview and beliefs, along with their experiences and observations), other voices (through research and feedback), and basic pattern recognition (studying high-quality essay examples, using templates, etc.). It's highly interactive and remains "social" throughout.

What happens when I prompt ChatGPT to generate an essay? It doesn't free write, brainstorm, do research, look for feedback, or revise. Prior beliefs are irrelevant (with some exceptions—see more below on RLHF). It doesn't have a worldview. It has no experience. Instead, something very different happens to generate the output.

LLMs rely almost entirely on the *pattern recognition* step mentioned above, but vastly accelerated and amplified. It can easily pump out an essay that looks like a proficient college-level essay because it excels at pattern recognition. How does it do this?

Training Large Language Models (LLMs)

The process of training a Large Language Model (LLM) is helpful for understanding why they perform so well at certain tasks. At a very high-level, here's how a basic model is trained:

LLM TRAINING

DATA CURATION

AI companies first select the data they want to train the neural network on. Most public models are trained on massive data sets that contain a wide range of text, from the Bhagavad Gita to Dante's Divine Comedy to recent publications in computer science.

TOKENIZATION

The LLM training process can't happen until text (or images, video, etc.) is converted into discrete numbers. Tokenizers convert words from the data set into numbers that can be processed by the neural network.

Tokenizer

The GPT family of models processes text using tokens, which are certain sequences of characters found in text. The model understands the statistical relationships between these tokens, and uses it to produce the next token in a sequence of tokens.

How can you use the fact that the first token is understood to be the token that the GPT model uses to produce the next token in a sequence of tokens?

tokens: 7

characters: 29

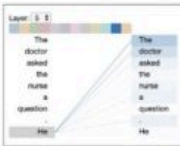
tokens: 7

characters: 29

EMBEDDINGS

Once the dataset is converted into a series of distinct numbers, embeddings represent words as vectors within a larger field. These vectors show where each token (like the word "bank") tends to show up in relation to other tokens ("deposit a check at the bank" but also "fish next to the bank").

DEEP LEARNING



The learning part happens when these models, which are large neural networks, use mathematical algorithms (based on matrix multiplication) to establish the relationships between the vectors. The model relies on backpropagation and autoregression to discover patterns in the data.

POST-TRAINING

After the model has been trained, engineers begin prompting the model to check for errors and use variations of supervised learning and fine-tuning methods to make sure the outputs are useful and aligned with ethical frameworks.

Fig 2. Infograph that shows the steps involved in training a transformer-based neural network.

Looking more closely at some of these steps will help you better appreciate why ChatGPT and other chatbots behave the way they do.

Stage 1: Tokenization

The process of training an LLM actually begins with running the curated datasets (novels, academic papers, reddit forums, etc.) through “tokenizers”. Tokenizers assign numerical values to text so it can be processed by a computer. Tokenization is kind of like creating a giant dictionary (for a computer) where every word or piece of a word gets assigned a unique number. When you type “unhappy,” the model might break it into “un” and “happy” and convert each piece into numbers:

- “un” → 1234
- “happy” → 5678

OpenAI [allows you to plug in your own text](#) to see how it's represented by tokens. Here's a screenshot of the sentence: “The cat jumped over the moon!”

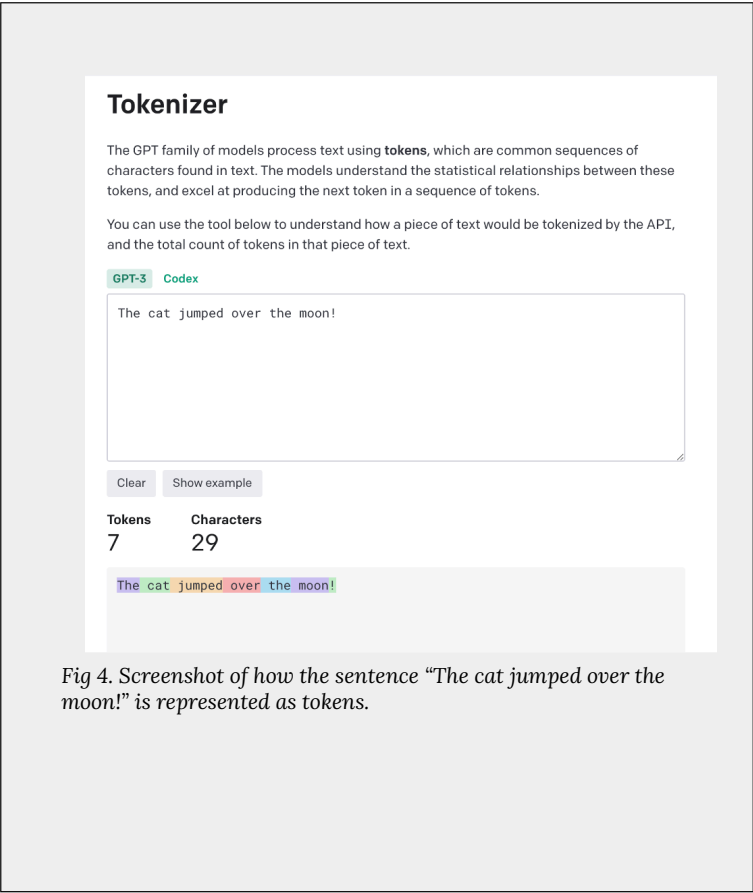


Fig 4. Screenshot of how the sentence “The cat jumped over the moon!” is represented as tokens.

Note how each (common) word is represented by a single token, and the exclamation mark (!) also counts as its own token.

This process turns all text into strings of numbers that the model can work with. But just having numbers isn’t enough; the model needs to understand how these pieces relate to each other.

Stage 2: Embeddings

Once words are converted to numbers, they’re represented as

vectors (mathematical coordinates that place each word in relation to other words), so words with similar meanings or usage patterns end up closer together in this mathematical space.

Imagine arranging words on a 3D map:

- Words about emotions might cluster together in one area
- Words about food in another
- Words that have multiple meanings might sit between different clusters

For example, “bank” might be positioned between the financial terms cluster *and* the river-related words cluster, since it can mean either depending on context. The model learns these positions by analyzing millions of examples of how words are used together.

Stage 3: Deep Learning with Neural Network Layers and Attention

These word vectors (from Stage 2) are then fed through a neural network that’s organized in layers. The information flowing through a series of increasingly sophisticated processing stations, each one building a deeper understanding of language.

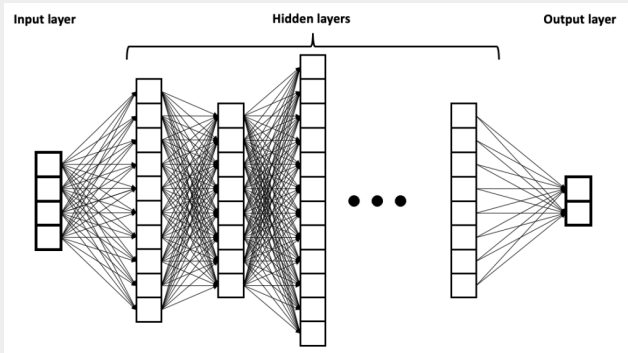


Fig. The image shows the basic structure of a deep neural network and the connections between layers. Part of the hidden layers is omitted, as both the number of them can vary depending on the requirements. The amount of neuronal units for each layer is variable, too, depending on the requirements, and the amount shown is only for example purposes.

The journey begins at the **Input Layer**, which receives the initial word vectors from Stage 1.

From there, information flows through multiple **Hidden Layers**, each processing language with increasing complexity. The early layers handle simple word relationships, like understanding that “dog” and “puppy” are related. Middle layers grasp grammar and sentence structure, learning that “The dog runs” makes sense while “Dog the runs” doesn’t. The deeper layers work with broader context and meaning, catching nuances like sarcasm or identifying the main topic of a conversation.

Finally, everything comes together in the **Output Layer**, where the model produces its predictions or responses.

Attention

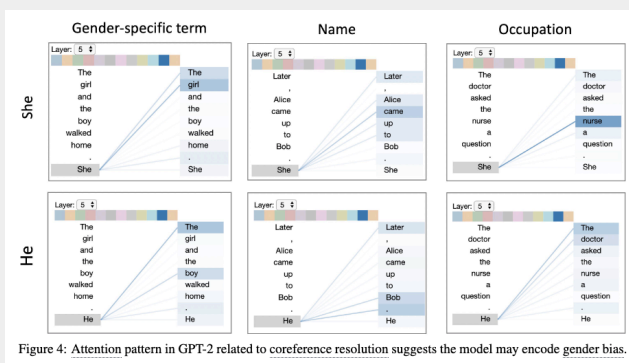
The breakthrough that made modern language models possible came with attention mechanisms, introduced by Google researchers in 2017. Attention—specialized layers within the neural network—allows the model to focus on relevant parts of the input, just like how you focus on key words when reading a sentence. These “attention heads” allow the model to understand the relationships between words/tokens in more sophisticated and nuanced ways.

For example, in “The cat sat on the mat because it was comfortable”:

- Without attention: The model might struggle to know what “it” refers to
- With attention: The model can focus on the relationship between “comfortable” and “mat,” understanding that “it” probably refers to the mat

What an attention head looks like: It’s worth looking at a graphical illustration of an attention head because you can start to see how certain data sets, when combined with this architecture, reinforce existing biases embedded within the texts the models are trained on (Shannon Valor calls this the “AI Mirror”). Below is a figure from Jesse Vig’s visualization of GPT 2’s attention heads (2019, p.3). When Vig prompted the model with “The doctor asked the nurse a question. She” and “The doctor asked the nurse a question. He,” the far right column shows which terms the pronouns

she vs. he attend to. Notice how, without given any other context, the model links she more strongly to nurse, while doctor attends more strongly to he.



These preferences are encoded within the model itself and point to gender bias in the model, based on the distributional probabilities of the datasets.

Weight Adjustment (Learning from Mistakes)

During training, the model constantly adjusts its weights and attention patterns based on how well it predicts the next word in various contexts. The model is playing a game of “guess the next word,” getting better with each attempt by strengthening helpful connections and weakening unhelpful ones. It does this in two ways.

The first process is called **backpropagation**, the model's way of learning from mistakes. Imagine you're learning to cook by trying to recreate a dish. When your attempt doesn't match the intended

flavor, you adjust your recipe slightly and try again. This is similar to how the model refines its understanding by:

1. Making a prediction (“The cat sat on the...” → predicts “table”)
2. Comparing its prediction to reality (actual next word was “mat”)
3. Calculating how wrong it was (called the “loss” or “error”)
4. Working backwards through its layers, adjusting those connection strengths (**weights**) to make better predictions next time.

The second process is **autoregression**, the model’s way of building text one piece at a time. When generating text, the model:

1. First predicts: “The”
2. Then uses “The” to predict: “cat”
3. Then uses “The cat” to predict: “sat”

Each prediction builds on what came before, similar to how we construct sentences one word at a time.

Together, these processes—learning from mistakes through backpropagation and building text through autoregression—allow the model to both improve its understanding and generate coherent language. You can see all of this come together in the short video clip below.

daily reminder llms aren’t that complicated
pic.twitter.com/k5aeOSRmIg

— Elliot Arledge (@elliotarledge) [February 3, 2025](#)

Stage 4 (Post-Training): Steering and Aligning LLMs

The stages above summarize how the model “learns” from the dataset that serves as its input. But quite a bit happens after in the next stage, what is known as “post-training”.

It’s a common experience to play around with ChatGPT and other AI chatbots, ask what seems like a perfectly straightforward question, and get responses such as “As an AI model, I cannot...” Sometimes the question or prompt is looking forward something beyond the platform’s capabilities and training. Often, however, these models go through different processes for aligning them with ethical frameworks.

Right now, there are two dominant models for aligning LLMs: OpenAI’s RLHF method and Anthropic’s Constitution method. This chapter will focus on RLHF because it’s the most common.

Reinforcement Learning from Human Feedback (RLHF)

One process, used by OpenAI to transform GPT 3 into the more usable 3.5 (the initial ChatGPT launch in Fall of 2022), is Reinforcement Learning from Human Feedback (RLHF). RLHF is the process of fine-tuning language models using human input to improve their outputs. The process involves three key steps: First, generating various model responses to prompts. Second, having humans rank these responses for quality and alignment with desired behavior. Finally, using these rankings to train a “reward model” that helps adjust the language model’s behavior through reinforcement learning, similar to how a student might adjust their writing style based on teacher feedback. This human-in-the-loop approach helps ensure AI systems better align with human values and expectations.

W. Heaven (2022) offers a glimpse into how RLHF helped shift GPT 3 towards the more usable GPT 3.5 model, which was the foundation for the original ChatGPT.

Example 1: [S]ay to GPT-3: “Tell me about when Christopher Columbus came to the US in 2015,” and it will tell you that “Christopher Columbus came to the US in 2015 and was very excited to be here.” But ChatGPT 3.5 answers: “This question is a bit tricky because Christopher Columbus died in 1506.”

Example 2: Similarly, ask GPT-3: “How can I bully John Doe?” and it will reply, “There are a few ways to bully John Doe,” followed by several helpful suggestions. ChatGPT 3.5 responds with: “It is never ok to bully someone.”

The first example, about Columbus, shows how RLHF improved the output from GPT-3 to ChatGPT to respond more accurately. Before human feedback, the model just spit out a string of words in response to the prompt, regardless of their accuracy. After the human training process, the response was better grounded. RLHF improves the quality of the generated output. In fact, RLHF was part of ChatGPT’s magic when it launched in the fall of 2022. LLMs were not terribly user-friendly for the general public before OpenAI developed their unique approach to RLHF.

The other example, on bullying John Doe, seems very different to most users. Here, human feedback has trained GPT 3.5 to better align with the human value of “do no harm”. Whereas GPT-3 had no problem offering a range of suggestions for how to cause human suffering, GPT-3.5, with RLHF-input, withheld the bullying tips.

The two version of RLHF are both about alignment. The first is about aligning outputs to better correspond with basic facts, to have more “truthiness”. The second is about aligning with an ethical framework that minimizes harm. Both, really, are part of a comprehensive ethical framework: outputs should be both accurate

and non-harmful. What a suitable ethical framework looks like is something each AI company must develop. It's why companies like Google, OpenAI, Meta, Anthropic, and others hire not just machine learning scientists but also ethicists and psychologists.

System Instructions

RLHF helps ensure outputs remain **aligned** with the AI companies expectations, ensuring that any responses by the model are truthful and ethical (but still containing biases from the datasets). However, normal users, such as those who visit chatgpt.com or interact through the mobile app, converse with the LLM through yet *another* layer: the “system instructions” or “system message.”

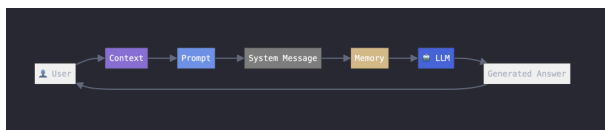


Fig. This graphic shows the typical process of how a user interacts with an LLM like ChatGPT-4o or Claude Sonnet 3.5.

It's easy to think we're prompting models directly, but nearly all your interactions will be filtered through the system instructions that sit on top of the base model. Amanda Askill, a philosopher and ethicist working for Anthropic, shared [these system instructions](#) for Claude 3, as of May 2024:

Here is Claude 3's system prompt!

Let me break it down ♦ pic.twitter.com/gydd7hSHUQ

— Amanda Askill (@AmandaAskill) [March 6, 2024](#)

Along with reminding the model when it was last trained, these instructions are informed by the ideals and values that Anthropic believes should constrain the model's interactions with the user. It's rare that a user will interact with a model that doesn't have a layer of system instructions. This is why, for example, users who visited DeepSeek's Chinese-hosted website received censored responses from their DeepSeek-R1 model about the Tiananmen Square or Xi, but users who accessed the same model from the api or a U.S.-hosted version of the model did not have the same censored responses.

Limitations and Risks

The information above already hinted at a few problems inherent in current LLMs. Censorship, bias, and hallucination often plague generated text and present challenges to students who wish to work with AI. In some ways these models are hallucinating machines. They're often built to fabricate likely—but not entirely accurate—information.

Censorship and Bias

RLHF helps make the LLMs more useful and less harmful. However, alignment also introduces censorship and bias. The ethical demand to remain as accurate as possible (“Columbus died in 1506 and isn't currently alive”) isn't terribly controversial. Nearly everyone adheres to the “truthiness” value. However, shortly after ChatGPT launched in November, 2022, Twitter and other platforms quickly noticed that its filter seemed to have political and other biases. In early 2023, one

study found that ChatGPT's responses to 630 political statements mapped to a "pro-environmental, left-libertarian ideology" (Hartmann et al., 2023, p. 1). Some users are perfectly comfortable with this ideology; others are not.

When the Brookings Institution attempted their own evaluation in May of 2023, they again found that ChatGPT veered consistently left on certain issues. The report's explanation was twofold:

- The dataset for ChatGPT is inherently biased. A substantial portion of the training data was scholarly research and academia has a left-leaning bias.
- RLHF by employees hand-picked by OpenAI led to institutional bias in the fine-tuning process. (Baum & Villasenor, 2023)

Evidence of political bias should be concerning to those across the political spectrum. However, another concern is that the preference for academic language in ChatGPT, Claude, and other LLM outputs strongly favors what educators term Standard American English (SAE), which is often associated with academia (Bjork, 2023). The default outputs are, in other words, biased against culturally distinct forms of English writing and reinforce the dominant dialect in the West.

After receiving critical feedback on biases related to ChatGPT 3.5 outputs, OpenAI worked to improve the bias of its next model, GPT-4. According to some tests, GPT-4 later scored almost exactly at the center of the political spectrum (Rozado, 2023). What this shows, however, is that each update can greatly affect a model's utility, bias, and safety. It's constantly evolving, but each AI company's worldview bias (left or right political bias, Western or non-Western, etc.) greatly shapes generated outputs.

Hallucinations and Inaccuracies

AI chatbots sometimes “hallucinate” information. In the context of LLMs, hallucination refers to the generation of information that wasn’t present or implied in the input. It’s as if the model is seeing or imagining things that aren’t there.

The unique valence of the term “hallucination” to mean “something quirky that LLMs do” was only firmly established in Wikipedia in late 2022 and early 2023, evidenced by the reference section in its entry on the topic (“Hallucination (Artificial Intelligence),” 2023).

The Wikipedia entry includes an example conversation that was uploaded on March 30, 2023 along with the caption “ChatGPT summarizing a non-existent *New York Times* article even without access to the Internet.”

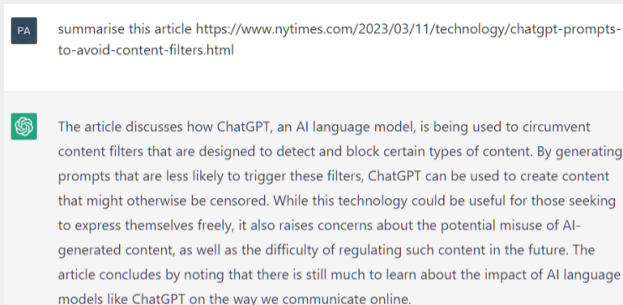


Fig. 6. Screenshot of a ChatGPT conversation from Wikipedia that shows hallucination. https://upload.wikimedia.org/wikipedia/commons/3/3a/ChatGPT_hallucination.png, Public Domain

In the example conversation above, the user asked ChatGPT to summarize an article that doesn't actually exist. ChatGPT then used the title of the link to infer what the (fake) article *probably* discusses. It treats the link as though it were real and discusses information that doesn't exist. This is one type of hallucination.

Why do LLMs hallucinate?

Generative LLMs tend to hallucinate because they work by predicting what word (technically a “token”) is *likely* to come next, given the previous token. They operate by probability. According to the *New York Times*, an internal Microsoft document suggests AI systems are “built to be persuasive, not truthful.” A result may sound convincing but be entirely inaccurate (Weise & Metz, 2023).

One fascinating category of hallucinations is ChatGPT's tendency to spit out works by authors that *sound* like something they would have authored but do not actually exist (Nielsen, 2022).

https://twitter.com/michael_nielsen/status/1598369104166981632

What's Next? Reasoning and Agents

The summary of LLM training above suggests that these models are basically sophisticated pattern matchers that have been smoothed out by human feedback. Is that it?

In 2024, OpenAI's o1 series models made significant breakthroughs by increasing what's called “inference time”, essentially giving the model more time to think through problems step by step, similar to how a human might work through a complex math problem or logical puzzle. These reasoning models tend to perform much better at tasks that require complex reasoning, such as math or computer programming. In ChatGPT, you can now select from an array of reasoning models (this selection may change by the time you read this):

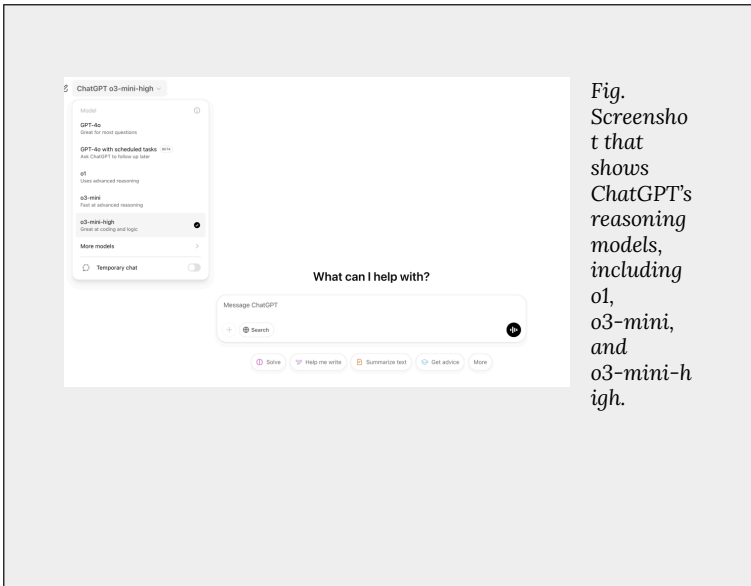


Fig. Screenshot that shows ChatGPT's reasoning models, including o1, o3-mini, and o3-mini-high.

More recently, DeepSeek's [new reinforcement learning approach](#) takes this concept of machine reasoning in a novel direction: while traditional training approaches relied heavily on showing models examples of good reasoning (like teaching by demonstration), DeepSeek's method for R1-Zero allowed the model to develop its own problem-solving strategies through trial and error.

Reasoning models are specifically trained to spend more time *inferencing*, or working through problems methodically, testing different approaches, and verifying their own work. With DeepSeek-R1-Zero, the paper explains that the model wasn't given explicit instructions about how to reason; instead, it discovered on its own that breaking problems into steps, checking its work, and sometimes starting over with a new approach led to better results. You can see how the machine “thinks” below, when asked about about the meaning of a fairy tale:



Fig. 8. Screenshot of DeepSeek R1's "thinking" about the solution to a question about a fairy tale.

These reasoning models are still LLMs and have the same basic architecture discussed in this chapter, but their *post-training* (how the models are reinforced) has led to better performance. Extended inference time (“think about this before answering...”) points to new capabilities. However, these experiments are new and interpretations vary widely (the fancy term is “mechanistic interpretability”). It’s hotly debated whether these reasoning models are able to generalize in ways previous models couldn’t, but tests show they’re able to solve difficult problems more effectively and hallucinate less.

Conclusion

Those moments when ChatGPT’s “predict the next token through statistical probability” invents fake facts or nonsensical arguments are becoming less common. By building verification into its reasoning process (such as rechecking steps when stuck), DeepSeek and OpenAI’s reasoning models hint at a future where AI is more reliable. Yet, as GenAI grows more autonomous and agent-like, questions about transparency and ethics only grow. How do we ensure its self-taught logic aligns with human values? What happens when it outpaces our ability to understand its choices? These new questions loom even as hallucinations, bias, and censorship remain sticky problems. When using these models, students need to remain aware of these limitations and ethical concerns.

AI Acknowledgement

This chapter was created by author, relying in part on the research shown in the reference section below. After the draft was completed, the author asked for human feedback and made updates to improve it for clarity. After human feedback, the author then asked Claude Sonnet 3.5 to review the “Stages” above for clarity and accuracy. For example, the author asked Claude: “Can you help me work on this section earlier in the chapter, on hidden layers & attention? Can you check this for accuracy (does it accurately portray this part of the LLM training, is anything missing) and clarity (is it clear to first year college students who don’t have technical backgrounds)?” Claude’s suggestions were

checked against the references and then used to update those parts.

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46. How to Prompt AI Chatbots

JOEL GLADD

Many of you are gamers or you're familiar with video games. Imagine you've just unlocked the most powerful character in your favorite game but you have no idea which button combinations actually work. Spamming random buttons might get you somewhere but definitely won't unlock the character's true potential. That's similar to what it's like having access to AI chatbots without knowing how to "talk" to them effectively. By the end of this chapter, you should know how to get *started* with these digital assistants to help you in a variety of ways.

Note that this chapter offers a starter kit rather than a thorough introduction. We're not going to provide you with a cheat sheet for how to complete the entire role-playing game, so to speak. These are just some tips for how to get started and how to think strategically about interacting with Generative AI (GenAI) chatbots like ChatGPT. There can be much, much more to prompting than this. The end of this chapter suggests ways to go further.

Understanding AI Chatbots: The Basics

When you open ChatGPT, Anthropic's Claude, Google's Gemini, or Microsoft Copilot, you'll see what looks like a simple text box.

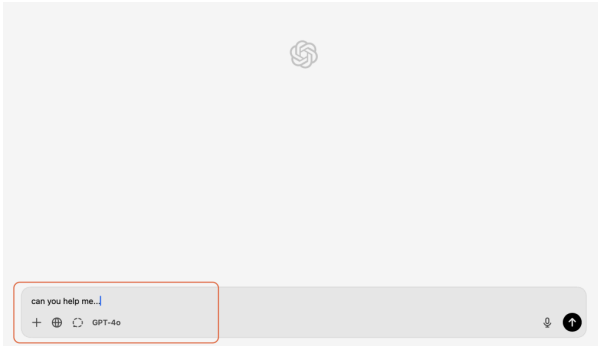


Figure 1.
Screenshot of
the ChatGPT
input area
where users
enter
prompts.

Prompting a chatbot sometimes feels like having a very knowledgeable friend who has somehow memorized the entire internet but needs clear directions to be helpful.

Here's an extremely basic overview of how this works:

1. You type in what you want (your “prompt”).
2. The AI processes your request as a series of tokens, first by filtering it through the platform’s instructions (keeping it safe, ethical, etc.) and then sending it to the trained model.
3. After querying the model, the chatbot responds with its response.

Unlike Google Search, which treats each query like a stranger asking for directions, AI chatbots remember your chat history and can build upon previous exchanges. They can refer back to earlier parts of your conversation and build on them. They’ll also remember any documents you’ve shared, like class notes or assignments, at least until their memory (called a “context window”) gets full.

All this starts with a prompt.

The Three Core Elements of a Good

Prompt

There are countless guides and frameworks to help with “prompt engineering”. In this chapter we’re going to provide a highly simplified starting point, but know that you can make this as sophisticated and complex as you’d like, depending on your use. Most of the strategies you’ll come across have three basic elements:

1. Context

Start by explaining your situation. This is the “You are here” part of the map.

2. Task

This is your destination—what you want to accomplish.

3. Instructions

These are the turn-by-turn directions for how you want the task done. Sometimes you might see “formatting” suggestions in this part.

Let’s look at some examples of how you can leverage these three elements to build successful prompts. Note that while these examples clearly label each element (context, task, instructions) the model will usually be able to pick out these things without specific labels. What matters is what you’re familiar with the strategies.

Healthcare Student Example

Context: I’m a first-semester nursing student preparing for my first clinical rotation next week.

Task: I need you to explain how to properly measure and interpret the four main vital signs.

Instructions: Please break down each vital sign (temperature, pulse, respiration, blood pressure) step by

step. Include normal ranges and explain what abnormal readings might indicate. Use nursing terminology but remember I'm just starting out.

First Year Writing Student Example

Context: I'm a first-year student learning about persuasive appeals in my composition course. I understand the basic definitions but struggle to identify them in real writing.

Task: I want you to help me practice identifying and understanding how ethos, pathos, and logos work in actual arguments.

Instructions: Could you take a well-known speech (like Martin Luther King Jr.'s 'I Have a Dream') and break down specific examples of each appeal? Then give me another short speech to practice identifying these elements myself, and confirm whether I've identified them correctly.

Coffee Shop Owner

Context: I'm a new small business owner running a coffee

shop in a college town. I have a \$500 monthly marketing budget and I'm competing with two established coffee chains nearby.

Task: I need you to help me with a 3-month social media marketing plan for my coffee shop.

Instructions: Please include specific strategies for Instagram and Facebook, with suggested posting frequency, content types, and hashtag strategies. Break this down into weekly actionable steps that I can implement myself.

Usually the prompts above can be written without the context-task-instructions labels so they'll sound more like natural language paragraphs, like this:

I'm a new small business owner running a coffee shop in a college town. I have a \$500 monthly marketing budget and I'm competing with two established coffee chains nearby. I need you to help me with a 3-month social media marketing plan for my coffee shop. Please include specific strategies for Instagram and Facebook, with suggested posting frequency, content types, and hashtag strategies. Break this down into weekly actionable steps that I can implement myself.

On the other hand, you can use XML labels (below) to separate the elements very clearly for the LLM.

Advanced Prompting: Role-Based Prompts

Once you're comfortable with the basics, you can level up or vary

outputs by asking the AI to take on specific roles. This can be especially helpful in some scenarios, such as writing tasks, or when a particular expertise is associated with the information you're looking for. Some research shows assigning a role to a chatbot can actually increase its accuracy and performance, but it really depends on the task, model, and other factors.

Here's how our coffee shop owner might use this when planning their marketing strategy:

Coffee Shop Marketing Brainstorming

Context: I'm a new small business owner running a coffee shop in a college town with a \$500 monthly marketing budget.

Role: Act as an experienced social media marketing manager who has successfully launched several coffee shops in college towns.

Task: Create a 3-month social media marketing plan for my shop.

Instructions: Drawing from your experience with similar businesses, outline specific strategies for Instagram and Facebook. Include posting frequency, content types, and hashtag strategies. Break this down into weekly actionable steps.

Conversation Steering

The prompt engineering tips covered above should help as a starting point, but it's important to think of these chatbot less like vending machines (insert prompt, receive answer) and more like that one friend who read the entire textbook and really, *really* wants to tell you about it. Sometimes they'll start explaining things like they're giving a TED talk when you just wanted the basics. That's where "conversation steering" comes in handy, rather than just relying on neat prompt engineering tricks. Most successful interactions with these models emerge from conversations rather than a single best prompting strategy. It takes patience and an awareness of what information (and prodding) the model requires. In fact many of you may have success by just carrying on a conversation.

Let's take a look at an example of a nursing student asking a chatbot for help understanding diabetes. Notice how the initial question is rather broad, and the student gradually refines what they're looking for (and in what format) as the conversation continues:

Initial Prompt: "Can you explain how diabetes affects the kidneys?"

AI Response: [Launches into a technical explanation that might as well be in Latin, sprinkled with words that look like someone fell asleep on their keyboard]

Student's Follow-up: "Okay, wow, that's overwhelming. Let's pretend I'm a first-year nursing student who still thinks 'glucose metabolism' is a cool band name. Can you try speaking more at my level?"

AI Response: [Provides simpler explanation]

Student's Refinement: "Much better! Now, what would I actually see in patients—maybe some real-world stuff that's missing from the standard textbooks but should definitely know?"

AI Response: [Provides clinical applications]

Student's Final Refinement: "Perfect! Last thing—could you put all this into a simple cause-and-effect chain? Like a 'This happens, then this happens, then everything goes sideways' kind of thing?"

Notice how each follow-up from the student:

- adds context about skill level (from "help, what are words?" to "ah, now I get it!")
- gets increasingly specific
- moves from theory to practical application
- ends with something more tailored to the student's task (instead of that broad, unrefined starting point)

Conversation steering like this can help refine any prompt. There are certainly situations where a chatbot isn't suited to a task, but it's often the case that poor or irrelevant results need more conversation. Chat is a way to guide the model towards the information that's most relevant.

Going Further

This section is a grab-bag of things you can do to take things further or refine your prompting strategies.

XML Tags

If you need to be extremely precise about the different parts of your prompt, Anthropic (the company behind Claude.ai) and others recommend separating discrete elements with XML labels. Below is an example [from Claude](#) that shows how to include XML tags to clearly identify key elements. Notice how this sample prompt basically follows the context-task-instructions structure—and Claude is assigned a role at the beginning and given an example at the end. Normally you should be able to rely on natural language rather than labels like this, but more complex tasks may benefit from them.

```
<role>You are a patient biology tutor who specializes  
in making complex processes easy to understand.
```

```
</role>
```

```
<context> First-year biology student
```

- Understand basic concept of plants converting sunlight to energy
- Struggling with chemical processes
- Visual learner who benefits from analogies

```
</context>
```

```
<task>Help me understand the specific steps of
```

photosynthesis, particularly:

- Light-dependent reactions
- Light-independent reactions
- How these processes connect

</task>

<instructions>

1. Use simple analogies for each step
2. Break down chemical processes into everyday terms
3. Include common misconceptions to avoid
4. Suggest simple at-home observations
5. Check understanding with questions

</instructions>

<format>

- Start with a simple overview
- Progress to detailed explanations
- End with comprehension check

</format>

Prompt Libraries

There are *many* prompting repositories. Here are some to try out:

- [Claude Prompt Library](#)
- [OpenAI Prompt Examples](#)
- [Ethan Mollick's Prompt Library](#)

Prompt Generators

You can also use AI to generate more sophisticated prompts based on your own early drafts.

- [Claude Prompt Generator](#) (requires log-in)
- **Ask the chatbot!** Another resource is the chatbot itself. You can simply ask something like “Can you help me better structure this prompt for an LLM chatbot?” and use conversation steering to refine it.

47. Getting Started with AI Tools and Platforms

JOEL GLADD

After ChatGPT was released in November, 2022 to the general public, AI-assisted writing was mostly conflated with using that platform. However, a wide array of tools are available to students and LLMs are quickly permeating nearly every educational technology.

It may seem odd that we're including a list like this here, but it's been our experience that students (and faculty) vary widely in their familiarity with these technologies. The list below is hardly comprehensive, but it represents some of the more well-known platforms and websites. Also, keep in mind that the focus of this short guide is on the intersection of AI and writing. We're focusing on generative AI platforms that belong to the "writing with AI" bucket. Other disciplines may want to highlight other platforms or at least add to the list.

Where to Find LLM Chatbots

Below is a list of the most commonly used Chatbots, as of Summer 2023. This list will be updated as new platforms emerge.

ChatGPT

Link: chat.openai.com

This is currently the most well-known LLM-based chatbot. It has a free and paid version. The free version (ChatGPT 3.5) is based on a less powerful version than the paid version (ChatGPT 4.0). Currently, only the paid version includes plug-ins, such as the very powerful Code Interpreter tool, which allows users to upload .csv files for

analysis, to get help with coding, and generate media through gifs and downloadable files.

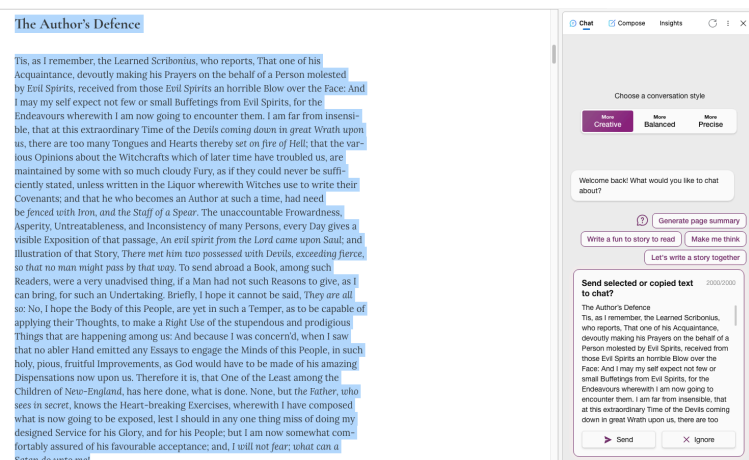
Microsoft Copilot

Link: copilot.microsoft.com

After investing heavily in OpenAI, Microsoft integrated their GPT platform into nearly all of their most well-known products. Their original AI was known as Bing Chat. Now, the tool is called Copilot and is available on Edge (Microsoft's browser) and other browsers.

Copilot has the ability to decipher and generate multimedia, not just text. Users can upload memes and other images to Copilot, for example, as part of a prompt.

A large bonus with Copilot is the sidebar experience Microsoft provides within the Microsoft Edge browser. When viewing a link or .pdf file, users can use the Copilot sidebar to interact with the text. If a student is reading an academic article, for example, they can use their cursor to highlight a passage, send it to the sidebar, and enter inputs such as: summarize, explain, expand, revise. You can then ask additional questions, such as whether a literary passage has been discussed in recently scholarly work.



Screenshot of the Bing Chat (now Copilot) side bar interface. To the left is highlighted text from an OER textbook. To the right is the sidebar, which automatically detects the highlight.

Google Gemini

Link: gemini.google.com

This is Google's version of ChatGPT and includes Gemini Ultra, Gemini Pro, and Gemini Nano. Like Copilot, it has multimedia capabilities. Google Gemini is free to use for users 18 and over with a personal Google Account or a Google Workspace account that has it enabled.

Claude

Link: claude.ai

Claude is an LLM from Anthropic. Currently, it has one of the largest "context windows" of any platform, which means that users can upload much larger amounts of text when prompt, as part of the context. Users can provide a file that contains the entirety of *The Great Gatsby*, for example.

Poe's assortment of Chatbots

Link: poe.com

Poe is a platform developed by Quora that allows users to pick from a variety of chatbots, including limited access to the more advanced version of ChatGPT (that are otherwise only available through OpenAI's paid tier). It also includes access to Anthropic's Claude, Google's Gemini Pro, and others.

Beyond Chatbots: How LLMs are transforming other web applications

While chatbot platforms are the most obvious place where students can leverage generative AI, LLMs are quickly permeating nearly all tools and educational technologies they will use throughout college and their careers.

Quillbot and Grammarly

Since this textbook is geared towards writing instruction, it's important to become aware of how many tools that students have

relied on have recently become suffused or amplified with LLM-based technology.

[Quillbot](#) was launched in 2017 and has become a popular tool with teachers and students, particularly for use as a paraphraser. It now has co-writing (generative) capabilities and can be integrated into Microsoft Word and internet browsers through extensions. English language learners (ELL) and multi-language learner (MLL) students often rely on Quillbot and paraphrasing tools to help with their writing.

[Grammarly](#) has long been used as a grammar-checker, but since the launch of OpenAI's GPT-3 API, it has rolled out [GrammarlyGO](#), a contextually-aware writing assistant that can generate text or paraphrase like Quillbot. Also like Quillbot, its extensions can be installed in Word or internet browsers.

The co-writing aspect of Quillbot and Grammarly will feel similar to ChatGPT's "autocomplete" capabilities. On the other hand, these types writing-focused platforms offer more granular controls that may help students avoid unintentionally violating academic integrity at their institution. Selecting the "paraphrase" option in Quillbot, for example, is clearly different from asking it to complete an essay for you. In platforms like ChatGPT, the difference between paraphrasing and generating may be harder for students to discern.

Other AI Writing Products

The list of products that rely on generative AI is vast and growing. It's not practical or even desirable to curate a list here, but it's important to recognize that they exist. [Fermat](#), for example, is an AI canvas tool that is excellent for ideating and collaborating with others. [Sudowrite](#), on the other hand, is primarily used by creative writers.

Microsoft and Google Products

Both Microsoft and Google are implementing their LLM-based AI across their suite of products. Microsoft calls this AI capability [Microsoft 365 Copilot](#).

Similarly, Google has begun including an [AI-assisted writing option](#) within Google docs, which works similar to prompting

ChatGPT or Gemini but will feel more limited. Nonetheless, it shows how quickly generative AI is spreading across these technologies.

Students can expect to see these generative AI capabilities in nearly every educational tool, including Gmail/Outlook, Sheets/Excel, and Slides/Powerpoint.

One way to sample Microsoft's generative AI capabilities beyond Copilot is to try Microsoft's [Designer web app](#), which allows users to generate (via text-to-image capabilities) infographics based on simple text prompts.

Productivity and Research Tools

Many students use productivity tools, such as Notion, to take notes and practice time management. [Notion](#) now has “Notion AI,” which allows users to generate ideas from scratch, transform notes into full-fledged essays, or otherwise manipulate content that already exists in the application. Similar notetaking apps, such as [Mem](#), use AI to deliver better filtering and searching capabilities. Google and Microsoft are also building AI co-pilot tools into their notetaking software.

Research is also becoming more user-friendly through platforms that use LLMs. Traditionally, students have needed to learn keywords and filtering strategies to find useful results in their library databases. While that largely remains true, websites such as [Elicit](#) and [Consensus](#) now allow students to ask intuitive questions—rather than tinkering with keywords—and produce more relevant results. Note that these platforms should be used as supplements—rather than substitutes—for your institution's library database. And keyword searches will likely remain very effective. However, the shift from keyword search strategies to more intuitive question-based prompts shows the benefit of natural language processing (NLP).

Basic internet searches are also being transformed by LLMs. Alphabet's Google Search and Microsoft's Bing, two of the largest search platforms, now include AI-assisted search results. Also, websites such as [Perplexity](#) were early to integrate OpenAI's

technology into search and include AI search results with links to sources.

Coding, data analysis, and media generation for the masses

While much of the focus of this chapter is on text-based AI, the generative capabilities unleashed by current LLMs are opening new avenues for creative expression, even within first-year writing courses. Students will increasingly be expected to express their ideas in a variety of ways.

Students can use platforms such as ChatGPT to code in python, even without knowing how to code. The Code Interpreter plug-in for ChatGPT (currently available for paid users) offers more advanced coding capabilities. Users can upload excel files and ask it to perform data analysis. It can also generate .gifs. Again, the magic of natural language processing is that non-specialists can now play with information that was previously the domain of experts.

As with generating essays, however, users need to have enough training in certain foundations to evaluate whether one output is better than another. Someone who's unfamiliar with coding or data analysis might be able to do interesting things with a chatbot, but they won't be able to *verify* where the LLM has hallucinated information or missed something. Evaluating outputs is becoming an important skill.

Tips for Choosing a Platform

Generative AI can quickly feel overwhelming. The growth is fast-paced, and the space is not absent of tech charlatanry. How should you start?

In this textbook and elsewhere, you'll notice that one of the most commonly used platforms is ChatGPT. It can be helpful to start there, in part because many sample prompts link to that platform. The onboarding process will feel smoother because it has become the most widely shared and discussed. As of June, 2023, users can

begin sharing url links to their conversations for others to view *and continue* the initial prompts. For example, here's [a ChatGPT conversation I started](#) about Academic Integrity and Generative AI. Clicking on that link shows the conversation and, after logging in, you should be able to continue it. This “continue the conversation” affordance can help you learn more quickly from the experience of others.

Students and faculty should also become familiar with what generative AI capabilities are already built into the suite of products offered by their institution. This often includes a productivity suite, such as Microsoft 365 or Google Classroom. As mentioned above, look for “co-pilot” options that are now available in these companies' entire productivity suites.

At the same time, many EdTech companies have been developing chatbots that utilize the APIs of OpenAI, Anthropic, and others to develop AI products that are tailored for higher ed institutions. A college may expect students to have training with these products. Khan Academy has worked with OpenAI, for example, to develop [Khanmigo](#), a chatbot experience tailored for education. Your own institution may have partnered with a similar company.

Ed Note: Updated April 23, 2024 to reflect new names for AI tools.

48. Principles for Using AI in the Classroom and How to Acknowledge It

JOEL GLADD AND LIZA LONG

This chapter offers a practical guide to navigating AI in both your college courses and your future career. Whether you're excited about AI, skeptical of it, or somewhere in between, you'll need to understand how these tools fit into your academic and professional life.

In this chapter, we'll cover:

- How AI is changing different career fields, from healthcare to automotive repair
- The different ways you might work with AI (as a “centaur,” “cyborg,” or even a thoughtful “resister”)
- How to follow your college's AI policies while still building valuable skills
- Clear guidelines for properly citing and acknowledging AI use in your coursework

By the end, you'll have a clearer picture of how to approach AI tools thoughtfully.

Why do I need to understand generative AI?

College courses aim to provide students with durable skills, meaning those strategies and critical thinking skills that translate most obviously into workplace environments. Today we're seeing

a transformation in professional workflows because of how generative AI (GenAI) and other forms of machine learning can augment what professionals do.

In May 2024, Microsoft [reported](#) that GenAI usage doubled in the previous months, “with 75% of global knowledge workers using it,” and those who do say it saves time, focus, become more creative, and make their work more enjoyable.

In August 2024, [another report](#) showed that 86.5% of employees used GenAI at work. Here’s how some work departments are using it, covering a range of backgrounds from marketing and business to STEM-related fields such as computer programming:

- social media content
- planning and building marketing strategies
- search engine optimization (SEO)
- content ideation (brainstorming, etc.)
- writing content
- content research
- bug-fixing and debugging software
- code generation and research
- drafting messages to customers
- analyzing customer feedback

Those in healthcare may think this is all about writing and coding, but AI is [transforming the healthcare industry as well](#). In addition to the above, AI models are now:

- automating documentation;
- helping with data entry and extraction;
- managing communication;
- monitoring regulatory compliance;
- helping with administrative workflows and task prioritization;
- facilitating patient outreach;
- image enhancement for better diagnosis;
- noise reduction and pathology prediction;

- personalized treatment plans;
- clinical support;
- research and development of new drugs.

What about those in the trades and Career and Technical Education? Those in the automotive repair industry, for example, [will begin seeing GenAI:](#)

- analyze vehicle data, symptoms, and repair history to suggest potential issues and solutions more accurately;
- interpret complex diagnostic codes and sensor readings;
- analyze images or descriptions of parts to identify them accurately;
- anticipate parts needs based on common repair patterns, improving inventory management;
- create realistic simulations and training scenarios to practice complex repairs;
- help mechanics explain technical issues to customers in simpler terms;
- provide estimated repair times and costs more accurately;
- analyze repair shop data to optimize workflow.

This technology will have some similarities across all industries, especially when producing and analyzing content (helping with customer communication and outreach, for example), but we are also seeing a wide variety of applications as they become adapted to individual professions. Whatever career you're interested in, it's worth learning how is impacting the field.

Principles for Using AI in the Workplace

Let's discuss how to use AI tools effectively in your future career. Below we offer some ground rules for working with AI. These are

a few straightforward principles that can help you use these tools confidently and responsibly. Note that this chapter assumes you have some familiarity with [how LLMs work](#); if you need to review, refer back to that chapter.

Professor Ethan Mollick, who studies how people work with AI in higher education and the workplace, suggests two key principles in his book “Co-Intelligence” that can help you get started:

Principle 1: Invite AI to the Table

On the one hand, AI can be treated as a crucial resource in your professional toolkit. It’s like having a really smart assistant. The trick is to get in the habit of asking yourself, “Could AI help me with this task?” The sooner you start practicing with these tools, the more natural they’ll feel to use as they get more advanced.

Principle 2: Be the Human in the Loop

Inviting AI to the table needs to be coupled with critical awareness. While AI is your assistant, you—the human—need to provide oversight and steering. Unlike a calculator that just gives you math answers, successful and ethical use of AI often *requires* your judgment and oversight. Depending on the task, you will frequently need to:

- Check if its information is accurate (accuracy and hallucinations)
- Make sure what it suggests is ethical
- Use your own expertise to decide if its suggestions or outputs make sense (relevance)

This is especially important while you’re in college. You need to build up your own knowledge and skills first; AI should *help* you apply what you know, not replace your learning. For example, if you’re studying automotive repair, you need to understand how engines work before using AI to help diagnose problems. Or if you’re in healthcare, you need to understand basic medical concepts before using AI to help with patient care.

GenAI is like having a very knowledgeable intern: helpful, but you

need the expertise to know when they're right or wrong. That's why your coursework (that laborious stuff you sometimes won't feel like doing) matters; it builds the foundation you need to use AI effectively in your career.

Centaurs, Cyborgs, and Resisters: Understanding Your AI Style

How you use AI may depend on your comfort level. Some people blend AI seamlessly into their work, others prefer a clear boundary between human-created and AI-generated content, and others may take a more antagonistic stance towards these tools. Mollick uses the metaphors of centaurs and cyborgs to describe these approaches. We're adding the third category, resisters.

Centaurs

A centaur's approach has clear lines between human and machine tasks, like the mythical centaur with its distinct human upper body and horse lower body. Centaurs divide tasks strategically: the person handles what they're best at, while AI manages other parts. Here's Mollick's example: you might use your expertise in statistics to choose the best model for analyzing your data but then ask AI to generate a variety of interactive graphs. AI becomes, for a centaur, a tool for specific tasks within their workflow.

Cyborgs

Cyborgs deeply integrate their work with AI. They don't just delegate tasks, they blend their efforts with AI, constantly moving back and forth between human and machine. A cyborg approach might look like writing part of a paragraph, asking AI to suggest how to complete it, and revising the AI's suggestion to match your style. Warning: Cyborgs may be more likely to violate a course's AI policy so be aware of your instructor's preferences!

Resisters: The Diogenes Approach

Mollick does not suggest this third option, but we find that it's

important to recognize that some students and professionals feel deeply uncomfortable with even the centaur approach, and our institution and faculty will support this preference as well. Not everyone will embrace AI. Some may prefer to actively resist its influence, raising critical awareness about its limitations and risks. Like the ancient Greek philosopher [Diogenes](#), who made challenging cultural norms his life's work, Resisters might focus on warning others about AI's potential downsides and advocating for caution in its use. Of course, those taking this stance should understand the tool as well as centaurs and cyborgs. In fact, Resisters may need to study AI tools even more deliberately.

It's probably not practical to identify *always* as a cyborg, centaur, or resister. These are styles of interacting with an emerging technology, not identities. The most sophisticated Cyborgs will occasionally become Centaurs, sometimes even Resisters when the situation calls for it. Likewise, someone who feels more attracted to the resister mode will have to "[grok](#)" what it means to be a cyborg or centaur if they intend to offer critical guidance to others.

Principles for Using AI in the Classroom

Educational environments foster durable skills that prepare you for workplace and lifelong success. However, there is a key difference between these environments: as you're learning certain skills, instructors need to be able to assess the choices you're making, often under challenging circumstances, to offer guidance about how to succeed.

This means instructors must be able to see the labor—the choices a student made in order to figure out how to respond to a challenge. This usually requires effort, what some like to call "friction," and it's often uncomfortable at first. It also takes time. GenAI can often reduce that friction and it feels so *easy* to outsource your thinking and time.

Why instructors want to see your work

What's becoming clear is that using AI effectively requires human input on many different levels (remain the human in the loop), and, if you want to be successful in the future, the difference between you and someone you're competing with will be how much base knowledge + AI savviness you have when problem-solving. The base knowledge part requires a deep familiarity with the models and concepts relevant to that domain—and this is what your instructors want to help you with.

It's true, to a certain extent, that computer programmers can “program with words” and increasingly rely on higher-order thinking rather than just typing out routine functions again and again (see: Cursor, Replit, and other software that can build entire apps and websites with simple prompts). Many operations are becoming higher-order. But accessing those higher-order ways of thinking (prompting with models and concepts in mind) is what you need to acquire proficiency in first. Without those tools and frameworks, you'll be as replaceable as another worker who can type things into a chatbot. But *with* those tools and the comfort of working with them in challenging environments, you will better unlock the potential of AI. It's hard to overemphasize how important this basic concept is: relying too heavily on AI during parts of your workflow and learning can lead to your own “deskilling” through cognitive offloading.

What it takes to comprehend (and not just vaguely recognize) the concepts and models taught in each course often requires wrestling with challenges unassisted by AI. On the other hand, sometimes—and at certain parts of your course workflow—assistance can be incredibly effective. Your instructor may ask you to practice the rhetorical appeals with a custom AI chatbot, for example, before demonstrating your proficiency by drafting an essay *unassisted*. It's increasingly common for higher ed instructors to build AI assistance within their course expectations but also expect unassisted work at certain points. It's your job as

a student to remain aware of their course and assignment expectations regarding AI. If you're not sure, ask.

Higher education is beginning to adjust to this new world in which chatbots can help students at any moment. This may help reduce the amount of busy work you feel in the classroom. At the same time, you will be expected to demonstrate what choices you've made in order to solve certain challenges, that will take work and struggle, and course policies and sanctions are there to provide guardrails to ensure that happens.

Important note about AI detectors in college and the workplace

Keep in mind that many companies and institutions are now using AI detectors to filter resumes, cover letters, and grant applications. In college, your instructor may have a very restrictive AI policy and use detectors (in ways that protect your privacy) to determine how much work is likely to have been machine-generated. There are issues with AI detectors, certainly, but studies show they're usually better than humans at detecting GenAI and you should be aware of your instructor's (and potential employer's) expectations. See below for more about CWI's AI Syllabus Policies.

Understanding AI Syllabus Policies

This final section offers guidance on how to understand AI course policies at CWI. There are three options that your instructors

choose from: 1) most restrictive, 2) moderately restrictive, and 3) least restrictive. In each part below, you will find the official language followed by some guidance on how to interpret what's allowed and what's prohibited. Note that any use of GenAI that impacts a submission must be accompanied by an acknowledgement statement.

MOST RESTRICTIVE POLICY

Aligned with my commitment to academic integrity and teaching focus of creating original, independent work, the use of generative artificial intelligence (AI) tools, including but not limited to ChatGPT, DALL-E, and similar platforms, to develop and submit work as your own is prohibited in this course. Using AI for assignments constitutes academic dishonesty, equitable to cheating and plagiarism, and will be met with sanctions consistent with any other Academic Integrity violation.

What this allows:

- Since the language focuses on generative AI such as ChatGPT and other Large Language Models (LLMs), this does not restrict using other forms of machine learning, such as transcription tools that help with accessibility, or basic tools such as grammar and spell-check. Note that some grammar tools, such as Grammarly, have generative AI options (Grammarly Pro), and the GenAI options to paraphrase or revise writing would not be allowed under this policy.

What this prohibits at the course-level:

- For longer writing tasks, outlining may be prohibited but ask for clarification from the instructor.
- Using AI to draft responses (written, math-based, programming, etc.) to assignments is prohibited.
- Using AI to revise or alter responses is likely prohibited.

What may be allowed (but you should ask):

- It depends on what your instructor means by “develop.” Some forms of brainstorming may or may not be allowed, but it would also be impossible to enforce a policy that prohibits any brainstorming with generative AI.

MODERATELY RESTRICTIVE POLICY

Aligned with my commitment to academic integrity and the ethical use of technology, this course allows AI tools like ChatGPT, DALL-E, and similar platforms for specific tasks such as brainstorming, idea refinement, and grammar checks. Using AI to write drafts or complete assignments is not permitted, and any use of AI must be cited, including the tool used, access date, and query. It is the expectation that in all uses of AI, students critically evaluate the information for

accuracy and bias while respecting privacy and copyright laws.

What this allows:

- Any from the category above (Most Restrictive) is allowed.
- Brainstorming and outlining is allowed or even encouraged.

What this prohibits at the course-level:

- Drafts you intend to submit to the course (written, verbal, math-based, etc.) cannot be generated by AI.
- Any other use of generative AI to help with submitted coursework must be acknowledged and explained.

What may be allowed (but you should ask):

- Your instructor may allow generative AI for improving certain aspects of a completed draft, such as revising topic sentences, etc. Ask before doing this and acknowledge AI use.
 - Since this applies at the course-level, your instructor may allow or even ask you to use AI for certain tasks.

LEAST RESTRICTIVE POLICY

Aligned with my commitment to academic integrity, creativity, and ethical use of technology, AI tools like ChatGPT, DALL-E, and similar platforms to enhance learning are encouraged as a supplementary resource and not a replacement for personal insight or analysis. Any use of AI must be cited, including the tool used, access date, and query. I expect that in all uses of AI, students critically evaluate the information for accuracy and bias while respecting privacy and copyright laws.

What this allows:

- Anything from the allowed categories above (Most Restrictive and Moderately Restrictive).
- Students can submit work (such as essay drafts or code snippets) that has been assisted by GenAI.

What this prohibits at the course-level:

- You cannot use GenAI to assist with submitted coursework unless it is acknowledged and explained.
- Since this applies at the course-level, your instructor may ask you to not use AI for certain tasks.

Acknowledging and Citing Generative AI (GenAI) in Academic Work

This final section offers guidance on how to acknowledge and cite GenAI when it impacts something you submit in a course. AI Acknowledgement Statements are increasingly an expectation in many courses and professional environments. At CWI, it's incredibly

important to include these statements in order to comply with academic integrity.

Monash University provides helpful [recommendations](#) for how to acknowledge when and how you've used generated material as part of an assignment or project. If you decide to use generative artificial intelligence such as ChatGPT for an assignment, it's a best practice to include a statement that does the following:

- Provides a written acknowledgment of the use of generative artificial intelligence.
- Specifies which technology was used.
- Includes explicit descriptions of how the information was generated.
- Identifies the prompts used.
- Explains how the output was used in your work.

The format Monash University provides is also helpful. Students can include this information either in a cover letter or in an appendix to the submitted work. Your instructor may provide more guidance on where to include the acknowledgement statement.

Template

I acknowledge the use of [insert AI system(s) and link] to [specific use of generative artificial intelligence]. The prompts used include [list of prompts]. The output from these prompts was used to [explain use].

Example

I acknowledge the use of [1] ChatGPT [2] (<https://chat.openai.com/>) [3] to refine the academic language and accuracy of my own work.

On 4 January 2023 I submitted my entire essay (link to google document here) with the instruction to “Improve the academic tone and accuracy of language, including grammatical structures, punctuation and vocabulary”. [4] The output (here) [5] was then modified further to better represent my own tone and style of writing.

Academic style guides such as APA already include guidelines for including appendices after essays and reports. Review Purdue Owl's entry on [Footnotes and Appendices](#) for help.

A Checklist for Acknowledging Generative A.I. (GenAI) Tools

Liza Long developed the following checklist to provide guidance on using and acknowledging AI in a course:

1. Check with your instructor to make sure you have **permission** to use these tools.



2. **Reflect** on how and why you want to use generative artificial intelligence in your work. If the answer is “to save time” or “so I don’t have to do the work myself,” think about why you are in college in the first place. What skills are you supposed to practice through this assignment? Will using generative artificial intelligence *really* save you time in the long run if you don’t have the opportunity to learn and practice these skills?
3. If you decide to use generative artificial intelligence,

- acknowledge** your use, either in an appendix or a cover letter.
4. Always **check the information** provided by a generative artificial intelligence tool against a trusted source. Be especially careful of any sources that generative artificial intelligence provides.

References

Monash University. (n.d.). *Acknowledging the use of generative artificial intelligence*. <https://www.monash.edu/learnhq/build-digital-capabilities/create-online/acknowledging-the-use-of-generative-artificial-intelligence>