

Chapter 3: Behavioral Change

When you think about going to work do you go because you want to be at your workplace or maybe you go because your job provides you with a paycheck? These are questions of what motivates you to work that we will explore in this module.

To continue developing strong human relations skills, we will learn about behavioral changes. In this chapter we will learn about types of motivation, how we can set goals and achieved them, how to improve our mindset and grit. Throughout this chapter, we will engage in activities to apply the human relations concepts we have learned.

3.1 Motivation and Goal Setting

Learning Objectives

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

- Identify the differences between intrinsic and extrinsic motivation.
- Identify short-term, mid-term, and long-term goals.
- Identify the benefits and rewards of setting goals.

Motivation

Why do we do the things we do? What motivations underlie our behaviors? **Motivation** describes the wants or needs that direct behavior toward a goal. In addition to biological motives, motivations can be **intrinsic** (arising from internal factors) or **extrinsic** (arising from external factors) (Figure 3.1). Intrinsically motivated behaviors are performed because of the sense of personal satisfaction that they bring, while extrinsically motivated behaviors are performed in order to receive something from others.

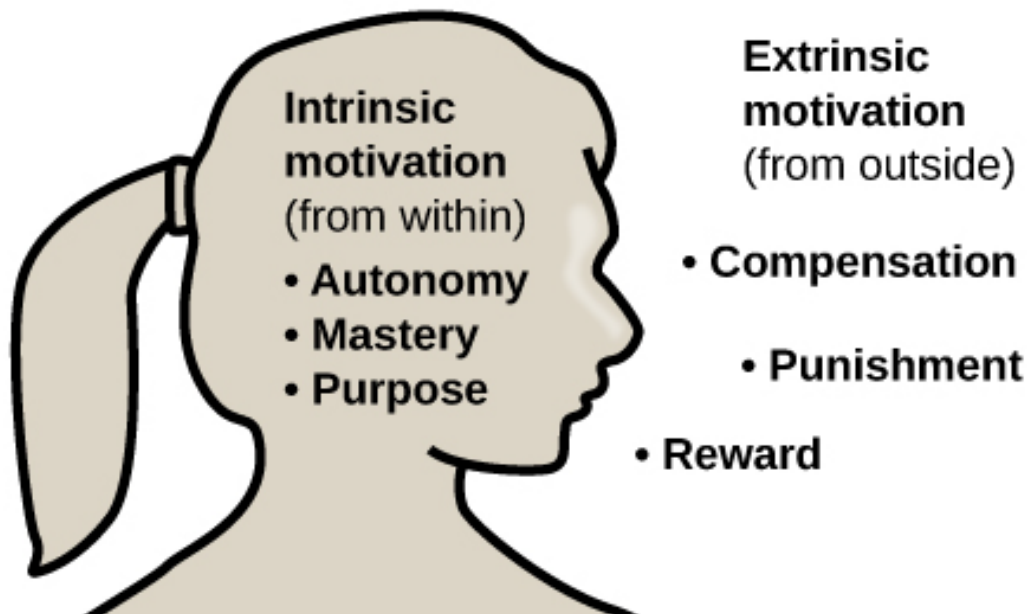


Figure 3.1 Intrinsic motivation comes from within the individual, while extrinsic motivation comes from outside the individual. [Motivation](#) – [Psychology 2e](#) – [CC BY 4.0](#)

Think about why you are pursuing an education. Are you here because you enjoy learning and want to pursue an education to make yourself a more well-rounded individual? If so, then you are intrinsically motivated. However, if you are here because you want to get a

college degree to make yourself more marketable for a high-paying career or to satisfy the demands of your parents, then your motivation is more extrinsic in nature.

In reality, our motivations are often a mix of both intrinsic and extrinsic factors, but the nature of the mix of these factors might change over time (often in ways that seem counter-intuitive). There is an old adage: “Choose a job that you love, and you will never have to work a day in your life,” meaning that if you enjoy your occupation, work doesn’t seem like . . . well, work. Some research suggests that this isn’t necessarily the case (Daniel & Esser, 1980; Deci, 1972; Deci, Koestner, & Ryan, 1999).

According to this research, receiving some sort of extrinsic reinforcement (i.e., getting paid) for engaging in behaviors that we enjoy leads to those behaviors being thought of as work no longer providing that same enjoyment. As a result, we might spend less time engaging in these reclassified behaviors in the absence of any extrinsic reinforcement. For example, Odessa loves baking, so in her free time, she bakes for fun. Oftentimes, after stocking shelves at her grocery store job, she often whips up pastries in the evenings because she enjoys baking. When a coworker in the store’s bakery department leaves his job, Odessa applies for his position and gets transferred to the bakery department. Although she enjoys what she does in her new job, after a few months, she no longer has much desire to concoct tasty treats in her free time. Baking has become work in a way that changes her motivation to do it (Figure 3.2). What Odessa has experienced is called the **overjustification effect**—intrinsic motivation is diminished when extrinsic motivation is given. This can lead to extinguishing the intrinsic motivation and creating a dependence on extrinsic rewards for continued performance (Deci et al., 1999).



Figure 3.2 Research suggests that when something we love to do, like baking, becomes our job, our intrinsic and extrinsic motivations to do it may change. [A happy baker in Oslo – Thomas Berg – CC-BY-SA 2.0](#)

Other studies suggest that intrinsic motivation may not be so vulnerable to the effects of extrinsic reinforcements, and in fact, reinforcements such as verbal praise might actually

increase intrinsic motivation (Arnold, 1976; Cameron & Pierce, 1994). In that case, Odessa's motivation to bake in her free time might remain high if, for example, customers regularly compliment her baking or cake decorating skills.

These apparent discrepancies in the researchers' findings may be understood by considering several factors. For one, physical reinforcement (such as money) and verbal reinforcement (such as praise) may affect an individual in very different ways. In fact, tangible rewards (i.e., money) tend to have more negative effects on intrinsic motivation than do intangible rewards (i.e., praise). Furthermore, the expectation of the extrinsic motivator by an individual is crucial: If the person expects to receive an extrinsic reward, then intrinsic motivation for the task tends to be reduced. If, however, there is no such expectation, and the extrinsic motivation is presented as a surprise, then intrinsic motivation for the task tends to persist (Deci et al., 1999).

In addition, culture may influence motivation. For example, in collectivistic cultures, it is common to do things for your family members because the emphasis is on the group and what is best for the entire group, rather than what is best for any one individual (Nisbett, Peng, Choi, & Norenzayan, 2001). This focus on others provides a broader perspective that takes into account both situational and cultural influences on behavior; thus, a more nuanced explanation of the causes of others' behavior becomes more likely.

In educational settings, students are more likely to experience intrinsic motivation to learn when they feel a sense of belonging and respect in the classroom. This internalization can be enhanced if the evaluative aspects of the classroom are de-emphasized and if students feel that they exercise some control over the learning environment. Furthermore, providing students with activities that are challenging, yet doable, along with a rationale for engaging in various learning activities can enhance intrinsic motivation for those tasks (Niemic & Ryan, 2009).

Consider Hakim, a first-year law student with two courses this semester: Family Law and Criminal Law. The Family Law professor has a rather intimidating classroom: He likes to put students on the spot with tough questions, which often leaves students feeling belittled or embarrassed. Grades are based exclusively on quizzes and exams, and the instructor posts results of each test on the classroom door. In contrast, the Criminal Law professor facilitates classroom discussions and respectful debates in small groups. The majority of the course grade is not exam-based, but centers on a student-designed research project on a crime issue of the student's choice. Research suggests that Hakim will be less intrinsically motivated in his Family Law course, where students are intimidated in the classroom setting, and there is an emphasis on teacher-driven evaluations. Hakim is likely to experience a higher level of intrinsic motivation in his Criminal Law course, where the class setting encourages inclusive collaboration and a respect for ideas, and where students have more influence over their learning activities.

Goal Setting

Some people are goal-oriented and seem to easily make decisions that lead to achieving their goals, while others seem just to “go with the flow” and accept what life gives them. While the latter may sound pleasantly relaxed, moving through life without goals may not lead anywhere at all. The fact that you are taking a college course now shows you might be working toward some goal.

A **goal** is a result we intend to reach mostly through our own actions. Things we do may move us closer to or farther away from that result. Studying moves us closer to success in a difficult course, while sleeping through the final exam may completely prevent reaching that goal. It is fairly obvious in an extreme case, yet a lot of college students do not reach their goal of graduating. The problem may be a lack of commitment to the goal, but often students have conflicting goals. Let us look at some examples of how students may experience conflicting goals.

To help his widowed mother, Juan went to work full time after high school but now, a few years later, he is dissatisfied with the kinds of jobs he has been able to get and has begun taking classes toward an Associate’s Degree in Computer Science in the evenings. He is often tired after work and his mother would like him to spend more time at home, and his girlfriend also wants to spend more time with him. Sometimes he cuts class to visit his mother or spend time with his girlfriend.

In her senior year of college, Becky has just been elected president of her sorority and is excited about planning a major community service project. She knows she should be spending more time on her senior thesis, but she feels her community project may gain her contacts that can help her find a better job after graduation. Besides, the sorority project is a lot more fun, and she is enjoying the esteem of her position. Even if she does not do well on her thesis, she is sure she will pass.

After an easy time in high school, Morgan is surprised their college classes are so hard. They have enough time to study for their first-year courses, but they also have a lot of friends and fun things to do. Sometimes they are surprised to look up from their computer to see it is midnight already, and they have not even started reading that chapter yet. Where does the time go? When they are stressed, however, they cannot study well, so they tell themselves they will get up early and read the chapter before class, and then they turn back to their computer to see who is online.

Sachito was successful in cutting back her hours at work to give her more time for her college classes, but it is difficult for her to get much studying done at home. Her husband has been wonderful about taking care of their young daughter, but he cannot do everything, and lately, he has been hinting more about asking her sister to babysit so that the two of them can go out in the evening the way they used to. Lately, when she has had

to study on a weekend, he leaves with his friends, and Sachito ends up spending the day with her daughter—and not getting much studying done.

What do these very different students have in common? Each has goals that conflict in one or more ways. Each needs to develop strategies to meet their other goals without threatening their academic success. And all of them have time management issues to work through, three because they feel they do not have enough time to do everything they want or need to do, and one because even though he has enough time, he needs to learn how to manage it more effectively. For all four of them, motivation and attitude will be important as they develop strategies to achieve their goals.

One way to prevent the problems that arise from conflicting goals is to think about all of your goals and priorities and learn ways to manage your time, your studies, and your social life to best reach your goals. Also, consider whether your goals support your core values that you identified in the previous module. You are more likely to achieve a goal that is aligned directly with your values.

Benefits of Goal Setting

Setting goals can turn your dreams into reality. You may have a dream to one day graduate from college, buy a new car, own your own home, travel abroad, etc. Any of these dreams can be broken down into a detailed goal and personal action plan. For example, maybe you want to buy a home 20 years from now. You will need \$40,000 as a down payment. That is a lot of money and may not feel achievable. But, if you break that \$40,000 into 20 years, that is \$2,000 a year. That sounds more manageable. And if we break it down even more, you can buy that house if you save about \$165 a month, or \$42 a week, or \$6 a day! Can you save \$6 a day, maybe by packing your lunch instead of the drive-thru? Our big dream is now an achievable, realistic goal.

Setting goals has many benefits. Goal setting allows you to create a plan to focus on your goal, rather than dreaming about the future. It also reduces anxiety and worry. It is much less anxiety-producing to focus on saving \$6 a day than it is to save \$40,000. It is also motivating because you will be able to measure your progress and successes. At the end of one year, you will have saved \$2,000, which will motivate you to keep saving and maybe even increase your saving goal. You will use your time and resources more wisely, often leading to faster and increased results.

As you think about your own goals, think about more than just being a student. You are also a person with your own values, individual needs, desires, hopes, dreams, and plans. Your long-term goals likely include graduation and a career but may also involve social relationships with others, a romantic relationship, family, hobbies or other activities, where and how you live, and so on. While you are a student you may not be actively pursuing all your goals with the same fervor, but they remain goals and are still important

in your life. Think about what goals you would like to achieve academically, vocationally (career), financially, personally, physically, spiritually, and socially.

Types of Goals

There are different types of goals, based on time and topic. Below we will discuss the major types of goals that you may set for yourself.

Long-term Goals

Long-term goals may begin with graduating from college and everything you want to happen thereafter. Often your long-term goals (graduating with an associate's degree) guide your mid-term goals (transferring to a university), and your short-term goals (getting an A on your upcoming exam) become steps for reaching those larger goals. Thinking about your goals in this way helps you realize how even the little things you do every day can keep you moving toward your most important long-term goals. Common long-term goals include things like earning your college degree, owning a home, getting a job in your career area, buying a new car, etc.

Mid-term goals

Mid-term goals involve plans for this school year or your time here at college or goals you want to achieve within the next six months to two years. Mid-term goals are often stepping stones to your long-term goals, but they can also be independent goals. For example, you may have a goal of transferring to university, which is a midterm goal that brings you closer to your long-term goal of getting your Bachelor's degree. Or, you may have a goal to pay off your credit card debt within the next 12 months or to save for a car that you plan to buy next year. When making mid-term goals related to your long-term goals, make a list of accomplishments that will lead you to your final goal.

Short-term goals

Short-term goals focus on today and the next few days and perhaps weeks. Short-term goals expect accomplishment in a short period of time, such as trying to get a bill paid in the next few days or getting an A on your upcoming exam. The definition of a short-term goal need not relate to any specific length of time. In other words, one may achieve (or fail to achieve) a short-term goal in a day, week, month, year, etc. The time frame for a short-term goal relates to its context in the overall timeline that it is being applied. For instance, one could measure a short-term goal for a month-long project in days; whereas one might measure a short-term goal for someone's lifetime in months or in years. Often, people define short-term goals in relation to their mid-term or long-term goals.

An example of how short-term and mid-term goals relate to long-term goals is wanting to earn your Bachelor's degree. If you have a goal of earning your Bachelor's degree in four years, a mid-term goal is getting your Associate's Degree and getting accepted to

your top choice University in two years. This can be broken down into a series of short-term goals such as your GPA goal for this term, your goal grade on an upcoming exam, and the amount of time you plan to study this weekend. Every long-term goal can be broken down into smaller steps and eventually lead to the question, “what do I have to do today to achieve my goal?” You will make goals in different areas of life and at different times in your life. At this point in your life, academic goals may take precedence but there are also other areas to consider.

Academic – You clearly already have an academic goal and are actively working on pursuing it. Academic goals may include things like a target GPA, completing your Associate’s Degree or certificate, or transferring to a university. It may also include short-term goals like completing your homework before the weekend.

Career – At this point, your career goals may be closely linked to your academic goals, such as getting a degree or certificate in your chosen career field. You may also have career goals of gaining experience in your field through internships and work experience.

Financial – Your financial goals are often tied to your career goals. You may have a salary goal or you may have the goal of saving for a home, a car, or a vacation. You may also have goals to reduce debt and manage your budget.

Health/Physical – Almost all of us have worked on physical goals. Many people have the goal to lose weight, increasing their exercise, or drinking more water. Other health goals could include establishing a regular sleep schedule, eating more fruits and vegetables, or seeing your doctor regularly. Health goals can also include mental health such as meditating or working to reduce stress and anxiety.

Social/Relationships – Even though it may feel like it sometimes, your life is more than school and work. You should also establish goals for your social relationships. For example, make a goal to stay in contact with a friend who moved, visit your family every week, or to have a date with your significant other once a week. Your social relationships are a vital part of your life and deserve your attention and focus.

Spiritual – Many people have religious goals, such as attending church regularly, practicing daily prayer, or joining a church group. Even if you are not religious, you may have spiritual goals such as time alone to meditate.

Personal/Hobbies – In addition to work and school, you may have hobbies or personal interests that you want to devote time and energy to. Perhaps you have a goal of rebuilding a motorcycle or learning how to knit or sew.

SMART Goals

SMART goals are commonly associated with Peter Drucker’s management by objectives concept. It gives structure and organization to the goal-setting process by establishing defined actions, milestones, objectives and deadlines. Creating SMART goals helps with

motivation and focus and keeps you moving forward. Every goal can be made into a SMART goal!

When writing your goals, follow these SMART guidelines (Figure 3.3). You should literally *write* them down because the act of finding the best words to describe your goals helps you think more clearly about them.



Figure 3.3 S.M.A.R.T. is an acronym for Specific, Measurable, Attainable, Relevant, and Time Based. Goals that you set should meet these five criteria. [SMART goals](#) – [Dungdm93](#)– [CC-BY-SA 4.0](#)

Goals should be SPECIFIC

- What exactly do you want to achieve? Avoid vague terms like “good,” and “more.” The more **specific** you are, the most likely you are to succeed.
- A specific goal has a much greater chance of being accomplished than a general goal.
- To set a specific goal, answer the six “W” questions:
 - Who: Who is involved?
 - What: What do I want to accomplish?
 - Where: Identify a location.
 - When: Establish a time frame.
 - Which: Identify requirements and constraints.
 - Why: Specific reasons, purpose or benefits of accomplishing the goal.

Example: “I will get a 3.5 GPA this semester so that I can apply to the Surgical Tech Program.”

Goals should be MEASURABLE

- Break your goal down into **measurable** elements so you have concrete evidence of your progress.
- Using numbers, quantities or time is a good way to ensure measurability.
- To determine if your goal is measurable, ask...
 - How much?
 - How many?
 - How often?
 - How will I know when it is accomplished?

Example: "I will study 18 hours per week, 3 hours per day for six days a week."

Goals should be ATTAINABLE

- A goal should be something to strive for and reach for but something that is **achievable and attainable**. For example, completing an Associate's Degree in one year may not be attainable while working full time with a family.
- Ask yourself if you have the time, money, resources and talent to make it happen
- Weigh the effort, time and other costs your goal will take against the benefits and other priorities you have in life.

Example: "I will complete 9 credit hours this semester while working part-time."

Goals should be REALISTIC

- Your goal should be **realistic and relevant**. Ask yourself if your goal and timeline is realistic for your life, why is the goal important to you, and what is the objective behind your goal? What makes the goal worthwhile for YOU?
 - Why is this goal important to you? (Make sure your goal aligns with your values.)
 - What are the benefits and rewards of accomplishing this goal?
 - Why will you be able to stay committed in the long-run?
 - Is it something that will still be important to you a month or year from now?

Example: "I will become a Surgical Technician in two years to pursue my interests and values in helping others and provide for my family."

Goals should be TIME-ORIENTED

- Your goal should have a clear deadline to help you stay accountable and motivated.

- Keep the **timeline** realistic but also a little challenging to create a sense of accountability and avoid procrastination.
- With no deadline, there's no sense of urgency, which leads to procrastination.
 - “Someday,” “soon,” and “eventually” are not deadlines.
 - Be specific with each deadline for each step along the way.

Example: “I will complete the draft of my research paper one-week before the deadline.”

Putting Your Goals into Action

Be certain you want to reach the goal. We are willing to work hard and sacrifice to reach goals that we really care about, ones that support our core values. But we are likely to give up when we encounter obstacles if we do not feel strongly about a goal. If you are doing something only because your parents or someone else wants you to, then it is not your own personal goal—and you may not be motivated to accomplish said goal.

Writing down your goals helps you to organize your thoughts and be clear with your goals, ensuring you meet the SMART goal criteria. When you write your goals, state them positively, stating what you *will* do rather than what you will not do. When you focus on doing something, that behavior often increases. On the other hand, when you focus on *not* doing something, that behavior also often increases. For example, if you have a goal to increase your health, you may focus on increasing your water intake to at least 64 ounces per day. This will lead you to think about and drink more water. But, if you focus on *not* drinking soda, you are likely to think about soda all day and end up drinking more.

After you have written down your goal, post it in a visible place to remind you every day of what it is you are working toward. When you see your goal, ask yourself, “Did my choices today help move more toward my goal? Are my actions supporting my goals?” Being reminded of your goal can help you stay motivated and focused. You should also consider sharing your goal with friends, family or classmates. Sharing your goal with supportive people who care about you will help you stay on track. Share your goal with people you know will be encouraging and cheer you on as you work toward your goal. In return, offer the same support for your friends’ goals and dreams.

Summary

- Motivation describes the wants or needs that direct behavior toward a goal. In addition to biological motives, motivations can be intrinsic (arising from internal factors) or extrinsic (arising from external factors)
- The overjustification effect occurs when intrinsic motivation is diminished due to the addition of extrinsic motivation.
- A goal is a result we intend to reach mostly through our own actions.
- There are different types of goals, based on time (long-term, mid-term, short-term) and topic (academic, career, financial, health/physical, social/relationships, spiritual, personal/hobbies).
- SMART goals give structure and organization to the goal-setting process by establishing defined actions, milestones, objectives and deadlines. SMART is an acronym that stands for Specific, Measurable, Attainable, Realistic/Relevant, Time-Oriented.

Discussion Questions

1. Describe an example of something you are intrinsically motivated to do and an example of something you are extrinsically motivated to do in your personal life.
2. How might intrinsic and extrinsic motivation be different or similar across cultural groups?
3. What process have you used to set goals for yourself in the past? Were you able to meet those goals?

Remix/Revisions featured in this section

- Small editing revisions to tailor the content to the Psychology of Human Relations course.
- Remix of motivation from [10.1 Motivation](#) (Psychology 2e – Openstax) and goal setting from [Chapter 3: Discover Your Values and Goals](#) (Learning Framework: Effective Strategies for College Success - Austin Community College).
- Changed formatting for photos to provide links to locations of images and CC licenses.
- Added doi links to references to comply with APA 7th edition formatting reference manual.

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3.2 Mindset and Grit

Learning Objectives

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

- Compare and contrast a Growth Mindset vs. a Fixed Mindset.
- Describe the concept of GRIT and how to apply it to your college success.

Fixed vs. Growth Mindset

Mindsets (the power of people's beliefs) are ways in which we formulate our thoughts about our abilities, relationships, and personality that influences our behaviors and how we feel (Figure 3.4). Students with a **fixed mindset** believe that their own intelligence and talent are innate traits that don't change. For example, they might say, "I just can't learn math." These students typically worry about not looking smart, get upset by mistakes, and give up sooner on tough tasks. With this mindset, people are more likely to attribute their successes to natural talent. Appearing smart, rather than learning, is more highly valued with this type of mindset in education and in the workplace.

Students with a **growth mindset** believe that ability can change as a result of effort, perseverance, and practice. They frequently say, "Math is hard, but if I keep trying, I can get better at it." Students with a growth mindset see mistakes as ways to learn, embrace challenges, and persist in the face of setbacks (Blackwell, Trzesniewski, & Dweck 2007). With a growth mindset, a person is more likely to believe that their successes are achieved through determination and hard work, the use of good strategies, and feedback from others. In education and the workplace, learning, rather than appearing smart, is more highly valued with this type of mindset (Dweck, 2006; Dweck 2016).

In an interview for OneDublin.org (Morehead, 2012), Dweck, defined both fixed and growth mindsets:

"In a fixed mindset students believe their basic abilities, their intelligence, their talents, are just fixed traits. They have a certain amount and that's that, and then their goal becomes to look smart all the time and never look dumb. In a growth mindset students understand that their talents and abilities can be developed through effort, good teaching and persistence. They don't necessarily think everyone's the same or anyone can be Einstein, but they believe everyone can get smarter if they work at it."

A large part of Dweck's research on mindsets has been done in the field of education, and how these mindsets affect a student's performance in the classroom. The growth mindset is clearly the more desirable of the two for students. According to Dweck, individuals with a "growth" theory are more likely to continue working hard despite setbacks. Individuals' theories of intelligence can be affected by subtle environmental cues. For example, children given praise such as "good job, you're very smart" are much more likely to develop a fixed mindset, whereas if given compliments like "good job, you worked very hard" they are likely to develop a growth mindset.



Figure 3.4 Individuals can be placed on a continuum according to their implicit views of where ability comes from. [Young people in conversation](#) – [Alexis Brown](#) – [Unsplash License](#)

While elements of our personality – such as sensitivity to mistakes and setbacks – can make us predisposed towards holding a certain mindset, we are able to develop and reshape our mindset through our interactions (Aldhous, 2008). In multiple studies, Carol Dweck and her colleagues noted that alterations in mindset could be achieved through “praising the process through which success was achieved” (Cimpian, Aree, Markman, & Dweck, 2007), “having [college aged students] read compelling scientific articles that support one view or the other” (Aldhous), or teaching junior high school students “that every time they try hard and learn something new, their brain forms new connections that, over time, make them smarter” (Dweck, 2007). These studies all demonstrate how framing and discussing students’ work and effort play a considerable role in the type of mindset students develop and students’ conceptions of their own ability.

Dweck and Jo Boaler have done extensive research on the topics of fixed and growth mindset. However, studies on mindset depict results that show that there is a disparity in the fixed and growth mindsets of female and male students. In Boaler’s (2013) research, she notes that fixed mindset beliefs lead to inequalities in education and are a main reason for low achievement and participation amongst minorities and female students.

Many women feel as though they are not smart enough nor capable enough to continue in certain subjects, such as STEM areas of academia, stating that, "gender differences in mathematics performance only existed among fixed mindset students" (Boaler, 2013).

Dweck's research and theory of growth and fixed mindsets has been useful in intervention strategies with at risk students, dispelling negative stereotypes in education held by teachers and students, understanding the impacts of self-theories on resilience, and understanding how process praise can foster a growth mindset and positively impact students' motivation levels (Veronikas and Shaughnessy, 2004). What students believe about their own intelligence can affect their effort, engagement, motivation, and achievement as measured by test scores, school grades, passing rate in post-secondary education, and other metrics (Aronson, Fried, & Good, 2002; Blackwell, Trzesniewski, & Dweck 2007; Dweck, Walton, & Cohen, 2011; Yeager, Walton, & Cohen, 2013).

Why This Matters: A growth mindset may contribute to better grades in school and a willingness to take on new challenges

1. **Lower Failure Rates:** Low-achieving students at 13 California high schools failed 7% fewer courses and improved their GPAs by .18 grade points after a one-period class designed to boost growth mindset (Yeager, Walton, & Cohen, 2013).
2. **Improved Scores:** When a group of struggling 7th grade students in New York City learned to 1) think of their brains as muscles that grow with exercise and 2) visualize new connections developing within their brains, their motivation and math scores improved at a time when math achievement typically declines (Blackwell, Trzesniewski, & Dweck 2007).
3. **Increased Effort:** Seventh-grade students receiving growth-mindset feedback ("I'm giving you these comments because I have high standards and know that you can meet them.") were twice as likely to revise and resubmit an assignment compared to students who received generic feedback (Yeager, Walton, & Cohen, 2013).
4. **More Problems Solved:** Students who saw a growth mindset-related message (e.g., "When you learn a new kind of math problem, you grow your math brain!") correctly solved 3-5% more online math problems compared to those who didn't see growth mindset-related messages. The effect carried over to the next math topic the students tackled (Yeager, Walton, & Cohen, 2013).

Students with a fixed mindset often do not realize that they can change their mindset and settle with an attitude that they cannot do better. But with a growth mind set attitude students can do anything they want as long as they work hard and consistent until they reach their goals (Figure 3.5)

TWO MINDSETS

CAROL S. DWECK, Ph D.

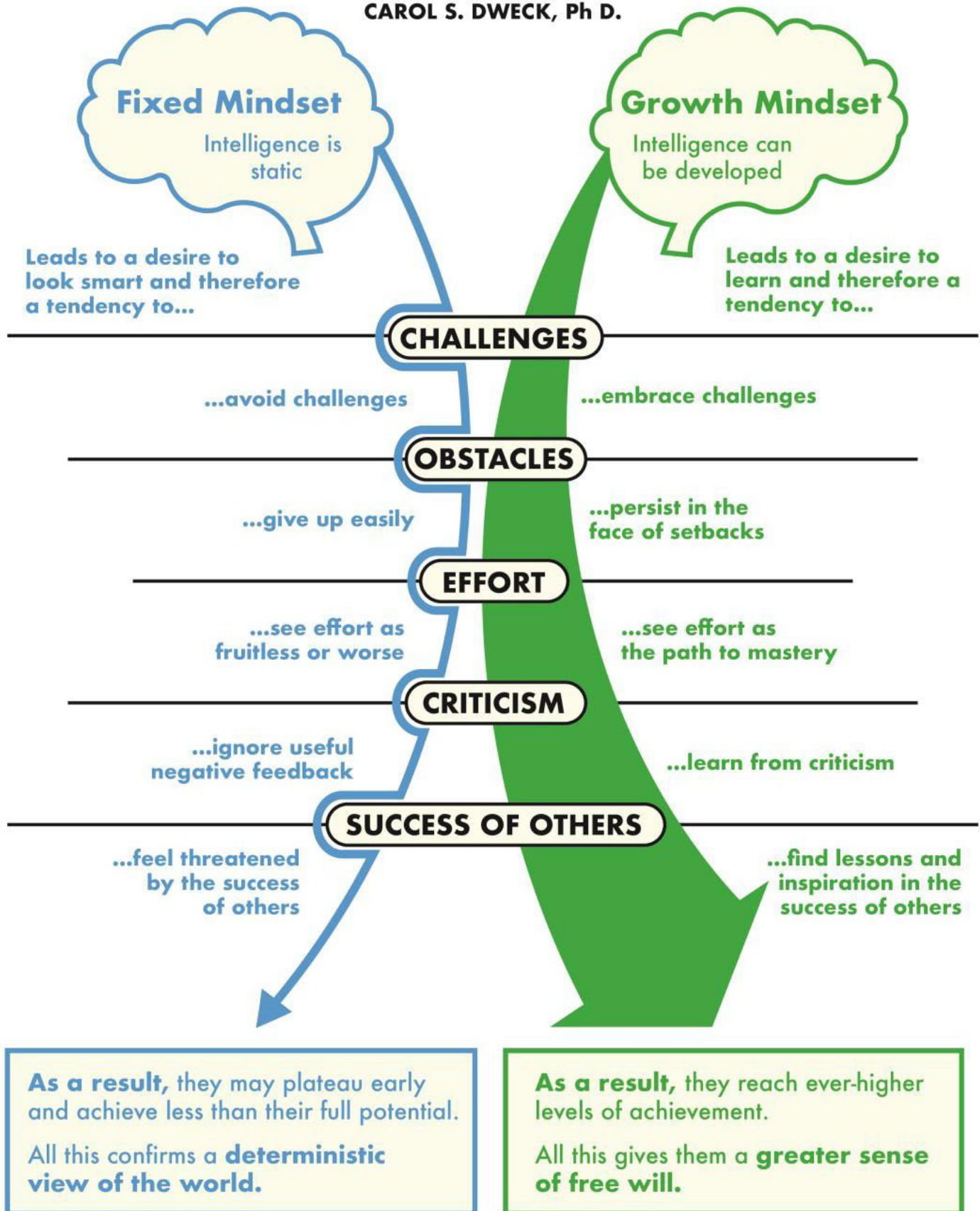


Figure 3.5 Fixed Mindset vs. Growth Mindset. - Ian Joslin - CC BY 4.0

Example of a Fixed Mindset

The following is an example of how a student with a fixed mindset might discuss their struggles in school:

Since I could remember, I never did well in school and struggled. I felt that there was nothing I could do to change who I was. I was just not smart. I have started and stopped my education many times. I have quit programs and changed majors when it got to be too much. I felt that I could never get far because I simply did not have the intelligence others did. I get frustrated and overwhelmed and the stress gets to me so much that I panic and slip into deep depression.

Here is an example of how a fixed mindset would impact someone struggling with issues in their personal life:

The past few years of my life have been quite hard in terms of family dynamics, personal and family health struggles, financial hardships, and much more. There have been many times when I wanted to quit school completely and sometimes not even wanted to get out of my house. I had no reason to live as I felt that I was never going to get through all of these challenges in my life. I guess I just have bad luck and failure is my destiny. I can't change anything.

Example of a Growth Mindset

The following is an example of how a student with a growth mindset might discuss their struggles in school:

I was always on my own. Meaning, I had no one to go to for help. My parents didn't speak or read English well at the time, so I always did my homework on my own, I struggled and felt alone. But something happened in college, and I finally knew that it was o.k. to ask for help and I no longer had to struggle quietly. I began to be disciplined and did my homework, went to class and asked questions. I knew that I might not have been the smartest person, but I understood if I wanted something really bad that I had to work hard for it. Here I am almost done with my Associate degree and getting ready to transfer, something I did not believe would ever happen. My attitude and my mind set has changed to believe that if I want to push myself to get something done, that I can. I never knew I could and I will never give up regardless of what comes my way.

Here is an example of how someone with a growth mindset would handle struggles in their personal life:

I found myself homeless taking care of my three children. One day I thought to myself how did I get here and how can I change my situation. I got married

young and had children young, my husband was abusive and left us. I could no longer sustain paying my bills and found myself in shelters and on the streets. With so much negative going on in my life, I knew that I needed help. I began to use the community services to help reinvent myself. I needed new skills to find a job, find a place to live and provide an opportunity for my children to have a chance at this life. My priority was their safety and I knew that being on the streets was not safe for them. I wanted to give up at times, but I was reminded that I was not alone. I found my new path and I enrolled in college with a new attitude that gave me hope. I am on my way to a new way of life and I know that I can do it.

Now that you've had a chance to read through examples of fixed and growth mindsets, you should have developed a better understanding of the types of language and thoughts are associated with each. You are now prepared to help shift your own thinking to align with a growth mindset and catch yourself when you express more fixed mindset thinking. Another skillset that will help you with this is GRIT, which we will discuss next.

What is GRIT?

According to Angela Duckworth, author of "GRIT," grit is a combination of passion and perseverance used to achieve a long-term, challenging goal (Figure 3.6). For some, GRIT can be thought of as a combination of guts (courage), resilience (flexibility), initiative (taking action) and tenacity (refusal to give up).



Figure 3.6 Passion and perseverance help people achieve their long-term goals. [Stone Push Overcoming Obstacle](#) - [Schäferle](#) – [Pixabay License](#)

The concept of grit, originally articulated by Duckworth et al. (2007), has developed and expanded in parallel with the field of positive psychology. Indeed Seligman (2011) in his major textbook *“Flourish,”* devoted an entire chapter to the concept. Of course, further research will either lead to the consolidation of the importance of grit, or will suggest there are other more important constructs, such as the longer established concept of resilience (Werner, 1996). In this section, we will look more in depth at the concept of GRIT.

One of the pillars of Psychology has been research into intelligence, which has looked at both theoretical and applied aspects of the concept. Clinical psychologists have relied on various iterations of the intelligence scales originally developed by Wechsler (1955). This is now on its fifth version (Wechsler, 2010; Hubbard and Hare, 2015). Though called the WAIS IV (the first version was called the Wechsler–Bellevue Scale, but the Bellevue Hospital name was dropped from all subsequent versions). However, research began to show certain contradictions that revealed individuals of an equal or lesser IQ were consistently outperforming their “more intelligent” counterparts (Duckworth et al., 2007). Indeed, in many cases, individuals with a lower or average IQ were achieving higher qualifications, obtaining more influential job roles and receiving a higher income (Duckworth et al., 2007).

Subsequently, there was a shift in research focus toward the importance of non-cognitive traits and factors in predicting and measuring achievement and success. Although the concepts such as perseverance, mindsets and goal driven behaviors which are identified to be non-cognitive traits were studied earlier in the field of education (Londoner, 1972; Levy and Dweck, 1998). A greater focus on the importance of these non-cognitive traits in this field was made popular by Angela Duckworth, who was mainly concerned with the concept of grit. This can be divided into two sub-components; perseverance of effort and consistency of interest and the importance of fostering grit to enhance personal achievement and success.

Duckworth et al. (2007, pp. 1087–1088) states that grit involves *“working strenuously towards challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress.”* Also, Duckworth stresses the importance of stamina in grit, and describes a “gritty” individual as somebody who treats their success and achievement as a marathon, rather than a sprint. Prior to Duckworth developing her research into non-cognitive predictors of academic success, educational research had focused on the more traditional measures of academic outcomes and less focus into non-cognitive traits. Thus, the research of Duckworth generated a shift in research focus into predominantly considering non-cognitive traits, such as grit, that showed an individual’s character was much more influential to their academic success.

Throughout the last decade of research into the construct of grit and its many applications, it has been recorded that there are certain demographic differences in grit.

Certain individuals are said to be more likely to develop grit and persevere in the face of adversity. Grit has been shown to correlate with gender (Flaming and Granato, 2017), with females scoring higher in grit than their male counterparts (Jaeger et al., 2010; Christensen and Knezek, 2014; Aswini and Amrita, 2017) (Figure 3.7); and age (Cupitt and Golshan, 2015).



Figure 3.7 Female students score higher in grit than their male counterparts. [Sias Library - Students Studying](#) - [Gary Todd](#) – [Public Domain](#)

Grit has been posited as a highly influential construct linked to academic success and achievement. It has been found that grit is associated with academic productivity and engagement (Hodge et al., 2017); academic motivation (Eskreis-Winkler et al., 2014); academic achievement (Pate et al., 2017); perseverance in challenging tasks (Lucas et al., 2015); academic performance (Kelly et al., 2014); amount of hours studying (Cross, 2014); learning strategies (Weisskirch, 2016); task values and goal orientation (Muenks et al., 2017, 2018); the pursuit and attainment of postgraduate training (Palisoc et al., 2017), and the retention of students (Crede et al., 2017). However, there are also some studies suggesting that grit is not a predictor of academic achievement and performance (Ivcevic and Brackett, 2014; Bazelais et al., 2016; Muenks et al., 2017; Palisoc et al., 2017).

Grit is also strongly related to well-being. It has been shown that grit is positively correlated with happiness (Singh and Jha, 2008); satisfaction and a sense of belonging (Bowman et al., 2015); purpose commitment (Hill et al., 2014); psychological well-being (Goodman et al., 2017); value and self-efficacy (Muenks et al., 2017, 2018); self-esteem (Weisskirch, 2016); a growth mindset (Duckworth et al., 2007; Hohanadel and Finamore, 2015); pursuing engagement and pleasure in life (Von Culin et al., 2014); higher mental health (Sharkey et al., 2017); emotional stability during stressful or negative life events (Blalock et al., 2015); and a sense of meaning in life (Von Culin et al., 2014).

Negative correlations between grit and certain psychological outcomes have also been established. Research has revealed a negative correlation between grit and perceived

stress, arguing that “psychological resources, particularly grit, make students less prone to stress.” While there is a positive association between perceived academic failure and stress (Lee, 2017). This research suggests that focusing on stress management may reduce perceived academic failure, enhance grit and, in turn, improve academic success and personal achievement.

Perhaps not surprisingly in a time of major neuroscientific advance, recent research has also revealed an association between grit and personal achievement linked to the brain activation of a specific area of the brain. The neural substrate for grit has been identified as being located in the dorsomedial prefrontal cortex (DMPFC) (Figure 3.8), the region also said to be responsible for concepts such as self-regulation, planning, goal-setting, and reflection of past experiences (Wang et al., 2017). However, this structural knowledge regarding the neural basis of grit should not discourage the idea that grit is a construct that can be fostered and built upon.

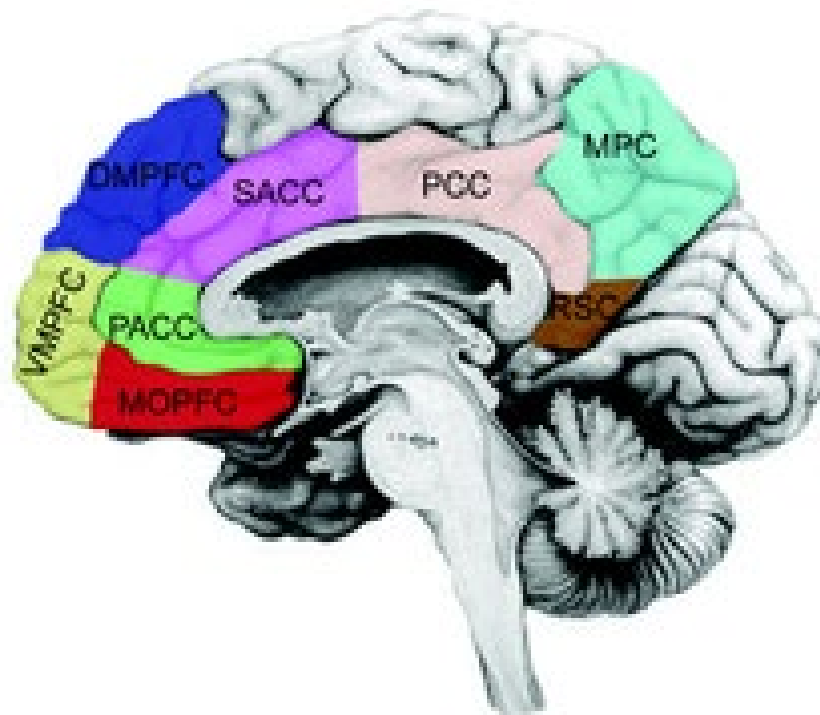


Figure 3.8 Cortical midline structures of the brain. The dorsomedial prefrontal cortex (DMPFC) is shown in blue.
[Cortical Midline Structures](#) - [Georg Northoff](#) - [CC BY 3.0](#)

A growth mindset has been strongly associated with the presence of grit in individuals (Hochanadel and Finamore, 2015) and an academic environment that promotes growth is likely to foster gritty students who will learn to persist through challenges (Duckworth et al., 2007; Hochanadel and Finamore, 2015). As you have read, there are many benefits to possessing grit and developing a growth mindset.

Summary

- Mindsets (the power of people's beliefs) are ways in which we formulate our thoughts about our abilities, relationships, and personality that influences our behaviors and how we feel.
- Students with a fixed mindset believe that their own intelligence and talent are innate traits that don't change. For example, they might say, "I just can't learn math."
- Students with a growth mindset believe that ability can change as a result of effort, perseverance, and practice.
- Grit is a combination of passion and perseverance used to achieve a long-term, challenging goal.
- Grit has been posited as a highly influential construct linked to academic success and achievement.

Discussion Questions

1. Give an example of fixed and growth mindset thinking.
2. Give an example of when you have demonstrated grit. What were you "gritty" about? Do you experience the same level of grittiness for other activities in your life?

Remix/Revisions featured in this section

- Small editing revisions to tailor the content to the Psychology of Human Relations course.
- Remix of mindset from [1.4 Fixed and Growth Mindset](#) (Student Success – College of the Canyons) and [Introduction to Growth Mindset](#) (Transforming Education), grit from [All That glitters Is not grit](#) (Kannangara et al., 2018 – Frontiers in Psychology).
- Changed formatting for photos to provide links to locations of images and CC licenses.
- Added doi links to references to comply with APA 7th edition formatting reference manual.

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Student Success. **Authored by:** Graciela Martinez, Anh Nguyen, & Liz Shaker. **Published by:** College of the Canyons. **Located at:**

https://drive.google.com/drive/folders/1JUKf9Y4kWSQ77fDsQIpw3MAeN-Zymnt_

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Kannangara, C. S., Allen, R. E., Waugh, G., Nahar, N., Khan, S. Z. N., Rogerson, S, & Carson, J. (2018). All That glitters Is not grit: Three studies of grit in university students.

Frontiers in Psychology, 9:1539. <https://doi.org/10.3389/fpsyg.2018.01539>

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