

UNIT 2: AN ACADEMIC MINDSET

Colleges and universities collectively form "academia," an abstract notion that includes the culture and the institutions of higher learning. College students need to learn what expectations their teachers and fellow students have for them in an academic setting, and they also need to learn how to tap into the tools that the academy offers to them.

ANALYSIS

On a simple level, analysis means "the resolution of anything complex into simple elements." The term comes from roots meaning "To break up," "to release," or "to set free." All of these things happen in analysis, and a significant part of the "point" of college classes is to learn how to analyze different subjects in different ways.

Overview:

On a pragmatic level, analysis involves asking how and why an object of study came to be, and why and how it came to be in the form it is in. Analysis can be something as simple about thinking through what is meant by a confusing message or it can be as complex as figuring out the age of the planet by looking at the radiation and magnetism present in rock strata. Most of the time, analysis involves asking a series of questions and comparing the answers to other known phenomena.

Because of this, most of the time analysis also involves subjective bias. People have a tendency to see the evidence that they want to see and to ignore the evidence that disagrees with them (see the [Enumeration of Favorable Circumstances](#)). Being able to set aside expectations and correct for bias is a huge part of developing an academic mindset.

Application:

One of the most important concepts in a college-level composition class, analysis involves understanding why something is the way it is. Analytic papers frequently involve studying a piece of writing and then attempting to put that piece of writing in a broader context. For example, an essay on human rights that was written in the 1950s will likely include different assumptions and cultural references than an essay on the same topic written in 2000. By understanding the reasons for these differences, the student learns more about the time periods, the essay, and human nature.

What to Avoid:

Frequently, students will mistake the notion of "why" for one of intentionality. In other words, it is a mistake to assume that something having a reason means it was intended. Many times, things happen without a purpose in mind, but there are still explanations for why they happened.

In order to understand the distinction, imagine an apple falling from a tree. The reason that the apple fell was because the force exerted by gravity overcame the resistance provided by the stem that connected it to the tree. However, neither the apple nor gravity intended for this to happen.

Another example might be even better. If you have ever stubbed your toe, you might have wanted to blame the table, chair, or whatever you bumped again. However, deep down you know that the furniture never intended anything at all. It's also unlikely that you stubbed your toe on purpose. However there are still explanations for how it happened—perhaps you were distracted or the room was dark (or maybe both).

COMMON KNOWLEDGE

Throughout the course of their academic careers, students will hear the phrase “common knowledge” repeated on a regular basis. This phrase means different things to different people, and invoking it often causes more problems than it solves.

Overview:

Common knowledge is a difficult concept to understand, and it is an even more difficult issue to handle responsibly. Simply put, some people believe that there is a pool of information that “everyone knows.” However, it is almost impossible to figure out what is in this pool. Too many people come from too many different backgrounds, and even people from the same backgrounds frequently disagree. Additionally, many things that were once considered “common knowledge” that “everyone knows” have later turned out to be falsehoods.

Application:

Students and instructors alike have ideas about what is common knowledge. Sometimes, instructors will tell students that there is no need to look up or to cite facts that are “common knowledge.” However, students should typically be sure to [cite anything they learn from another source](#), just to be safe. More importantly, everyone in an academic setting should be careful about what is assumed to be true. After all, things like the shape of the planet, the organization of the solar system, and the relative abilities of certain races and genders in intellectual pursuits have all been associated with blatantly incorrect assumptions that went unchallenged as “common knowledge” at different points in history.

Consider two circumstances where a student might be tempted to assert a claim without support, arguing that the claim needs no support because it is “common knowledge.”

In the first instance, imagine that a student wants to make a claim about lowering the drinking age in the U.S. and claims that “people in Europe have fewer problems with alcohol abuse” than people in the U.S. This claim might be believed by the student. However, depending on what is being counted as a problem, and depending on which of the many countries in Europe is being studied, the exact *opposite* might be true.

In another example, think about the claim still believed by many people today that humans only use a small fraction of their brain (10% was the old myth). Someone who believes this myth might repeat it, actively misinforming others—by accident.

What to Avoid:

Avoid falling into the “everyone knows” trap. If, as a writer, you find yourself making some sort of factual claim, try to ask yourself [how you know](#) that claim to be true. When doing research, do not accept sources that make an appeal to validity based on unproven assumptions. Try not to assume you are right. If at all possible, learn a little more about even those facts you are certain about. Looking something up might result in a bit more effort, but it can also result in learning something new or in confirming a long-held belief. Either case is better than being caught stating something that is wrong.

BURDEN OF PROOF

Of all the concepts that frame academic argument, the notion of *burden of proof* is both among the most familiar to student writers and among the most difficult to grasp. For the most part, student writers will find that the burden of proof is on them, meaning that if they want someone to believe a claim, they must provide evidence to support that claim. The burden of proof, or the requirement to provide evidence, is always on the person seeking to prove a claim or change the status quo.

Overview:

The *burden of proof* is a term to explain a simple but important concept. Basically, any claim requires **evidence** to support it, and that evidence must be strong enough to suggest to a neutral reader that the claim is worth considering. Otherwise, the **status quo** is that the claim is unproven. Think about the concept that someone is “innocent until proven guilty.” This statement implies the status quo (innocent) and it tells us who has the *burden of proof* (the person claiming the suspect is guilty). Note that it is possible to be “right” without meeting the burden of proof. However, a *chance* of being correct is not the same thing as having a valid argument.

Failing to meet the burden of proof does not mean the claim is untrue—it means that the claim is rejected until such time as the burden is met. For academic settings, the principle of a falsifiable argument is an essential tool. Evidence is presented and weighed before a conclusion is reached.

Academic arguments must meet the burden of proof for a simple reason: the inability to prove a negative. A specific claim can be falsified. For example, a claim that the arrowhead I found in my backyard is a prehistoric artifact can be examined and found to be lacking. Perhaps the arrowhead is made of the wrong materials, has signs of modern machining, or simply isn't an arrowhead at all but rather an odd piece of rock that just looks like an arrowhead. However, this falsification does not prove that there are no prehistoric artifacts in my backyard.

Application:

In **academic writing** and college-level arguments, intuition and opinion are not enough to establish validity. In other words, it is not enough for someone to say “X might be true,” or “We don't know Y isn't the explanation.” Instead, the person making the suggestion has to prove that there is evidence in favor of his or her suggestion being valid. This means that a student writer can't simply rely on what “**everyone knows**” and must instead provide a logically valid argument. Most importantly, writers do not get to assume that they are right. Instead, they have to earn the respect of their readers.

What to Avoid:

Quite simply, writers should avoid assuming that they are right. Instead, they should consider the reasons that others might disagree with them and then construct an argument using evidence and support. Student writers need to be careful that they do not trust information sources that act as if they are above the need for evidence, as well. Avoid making and trusting arguments that assume a position is true without evidence or justification.

EVIDENCE

The term 'evidence' is used in crime dramas, in personal disputes, in courts of law, and in academic writing. The types of evidence might vary dramatically, but most of the time when making a claim that others will dispute, people need evidence.

Overview:

Evidence is a concept that is closely linked to the notion of proof, and therefore to the notion of [burden of proof](#). Sometimes, evidence is used to describe 'support' that an idea is or is not valid. Frequently, the phrase 'empirical evidence' is invoked. Evidence is typically gathered through observation. Ideally, evidence would be gathered through direct observation conducted by neutral individuals in controlled conditions. Instead, what really happens is that sometimes the observation is indirect, sometimes the people gathering the information have a bias, and sometimes the circumstances are not under the control of the person gathering the data. However, because each of these factors can be understood and taken into consideration, it is still possible to gain meaningful support for claims and to prevent many arguments from becoming matters of opinion.

Application:

Evidence supports the arguments made in [academic writing](#) and college-level arguments. Frequently, student writers have to assemble support, and then they have to decide how that support does or does not contribute to an argument. Sometimes, a single piece of evidence might prove that a claim is valid. Other times, the claim will require multiple pieces of evidence in support.

Mishandling evidence is a common problem in student writing, because it is sometimes difficult to remember the assumptions that we are making. For example, consider a poll that indicates that a majority of Americans think that there was some sort of conspiracy to assassinate John F. Kennedy. This is not proof, in any way, that a conspiracy existed (facts are not decided by majority opinion); it is proof, however, that the Americans who were polled do, in fact, question the official story.

What to Avoid:

Writers need to avoid thinking that finding someone else who agrees with them constitutes evidence. They also need to avoid logical fallacy in their arguments. Finally, and most importantly, they need to avoid thinking that all evidence proves all arguments equally well.

People frequently commit logical fallacies (Unit 6) when grappling with an issue, and this can result in major errors. Students should avoid thinking that an argumentative "chain" that they encounter in another piece of writing is valid simply because it is compelling. Many, many flawed arguments are out there, and student writers are responsible for their mistakes when they accept them.

WRITING TO LEARN

Writing is a difficult process, and it is not a natural activity. While many of the activities performed in college involve recall and retention, writing is different. For some, it is challenging. One thing to keep in mind is that the difficulty of writing is often part of its purpose.

Overview:

The process of writing requires that someone understands a subject well enough to be able to explain it to others. Explaining the subject then requires the writer to understand how others are going to react to the information being presented. Adjusting to reader reactions means that the writer needs to consider additional points of view. In other words, the act of writing requires a lot of learning.

In simple terms, writing is an attempt to chronicle the writer's thought process. This means that any well-developed piece of writing represents the writer thinking about the subject at hand. Writing makes such a tempting target to instructors for exactly this reason. A student might be able to guess a correct answer on a test, or members of a class might be able to cram the night before an exam (only to dump the information from their memories later), but in order to write a paper, students often need to actually think a little about the subject involved.

Application:

Academic writing is about learning. Most college students can find themselves filling in a page or two of writing without a lot of effort. They can outline an issue, add a few thoughts to the basic outline, and then manage to include an example or two from class lecture notes. However, more than this is a challenge, and that challenge is the whole point. Students who try to write completely from what they already know are frequently missing the point.

Student writers should get in the habit of beginning a writing assignment with a list of things that they still need to know. Additionally, student writers should try to understand the purpose of the assignment. Is the instructor checking to see if the students in the class understood the reading? Is the instructor looking for the student to engage the textbook or some other text? Is the assignment about developing ideas or reviewing content? Both or neither?

What to Avoid:

Avoid thinking that the work of a paper is accidental. If a paper does not require actual effort to complete, then there is a good chance that the paper is not being done correctly. A physical workout that results in no fatigue, no energy loss, and no impact is unlikely to result in significantly improved fitness. A mental workout that takes no effort to complete is unlikely to result in deep learning.