

Getting Argumentative



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When students understand how to really "argue," every class discussion can be a chance for critical thinking.

Abstract



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What does it mean to think critically? How exactly how does one become a critical thinker? Educators often want students to be critical thinkers because we don't want them to believe everything they hear or read. In this sense, critical thinking means "be skeptical." Just because a Facebook post quotes Einstein as saying, "If you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid" doesn't mean Einstein said that. (He didn't.) But while being skeptical or

suspicious is a useful mindset, there is more to critical thinking, and more to why students need to sharpen it.

Why is it so essential to teach critical thinking now? Einstein's fake quote tips us off to one reason: a massive amount of misinformation is available to students (and adults), with a click of a mouse. In addition, we live in an age of sound bites and the *tldr* (too long; didn't read) mentality. People have become unaccustomed to thinking deeply about or analyzing glib statements. Finally, we live in a world of incredibly complex problems—and complex problems demand complex critical thinking.

Just telling students to be critical thinkers provides them little guidance. So what skills *do* we need to teach young people to enable them to become good thinkers? I believe a good starting place is to specifically teach students what an argument is and how to evaluate one. We don't often do that, even when we think we do. Consider this typical classroom exchange:

TEACHER: The district is requiring all students to wear masks because of the COVID-19 pandemic. Let's think critically about that. What do you think?

OLIVIA: It's a good idea. We should all wear masks.

TREVOR: I think everyone ought to be able to decide for themselves. They can't make us wear them.

XOCO: I don't like wearing them, but we should if it makes people feel safe.

KIM: Masks don't work, so it's stupid.

TEACHER: Interesting thoughts. Now let's open our books to page 47.

Many classroom discussions follow this pattern: Students offer opinions and after hearing a few of them, we move on. But what exactly *are* students' statements here? They are *conclusions*, the end of some train of thought. Students were free to critique the mask mandate, but I don't consider this interchange to represent critical thinking—and you probably agree.

Even if this teacher were to ask students why they think as they do, critical thinking might not happen:

TEACHER: Why did you say that, Olivia?

OLIVIA: Because you asked me what I thought.

TEACHER: No, I mean what's the reason you said that masks are a good idea?

OLIVIA: You asked me what I thought, so I answered your question.

Olivia answered the teacher's questions reasonably, but those questions were ambiguous. To get Olivia—or any student—to explain how they reached a conclusion about an issue, we need to teach learners specifically what an "argument" is.

Doesn't Everyone Know What "Argument" Means?

Sadly, *no*. Yes, *argument* is a familiar word. But to many students, it means a quarrel between people, possibly with yelling involved—not a workable definition for argumentative writing or speaking. And yes, students are often assigned to

write an argument, especially since states have established common standards for what students should learn. When these standards came along, teachers had to focus more on argumentative writing. Creating prompts that would require students to write an argument was a challenge for those of us who previously used mostly creative writing prompts ("What would you do if an alien landed on Earth?") So, we started giving assignments like, "Write an argument for more recess time at school" or "Write an argument for paying college athletes." The problem was, we never specifically taught students what an argument is. Many still don't know, but making a good argument is a key to critical thinking.



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When I tell teachers they should provide a specific, workable definition of *argument* before giving such assignments, it's often revealed that *teachers* don't know precisely what an argument is either. When I ask a group of teachers how they'd answer students who say, "I'm not sure what you want. What exactly *is* an argument?", no two teachers ever answer me in the same way. Here are some

definitions of the term that I've gotten. Ask yourself whether your students would find each answer useful.

- A logical thought process that conveys a valid case.
- A claim with supporting arguments.
- A topic, point, counterpoint, leading to a hopeful resolution.
- An overall point with supporting data.
- A hook and a debatable thesis.
- An opinion about something, either positive or negative.

Clearly, these teachers all sort of know what an argument is. But students don't do well with "sort of." They need an exact, understandable, workable definition.

Defining Argument—and Evaluating Arguments

With my students, I use a simple definition: "An argument = statements that lead to a conclusion." Yes, we can make it trickier. For instance, one model says an argument includes claims, grounds, backing, rebuttal, warrants, and qualifiers. I don't want my students to spend lots of time trying to figure out the difference between warrants and grounds, though. Students get more confused, not less. I've found "Statements that lead to a conclusion" is a successful definition that improves argumentative writing and speaking.

This definition also fits with how the field of logic conceives of an argument. The classic example of an argument in logic books is:

█ All men are mortal.

Socrates is a man.

Therefore, Socrates is mortal.

We have a conclusion (Socrates is mortal), and we have statements that lead to the conclusion. If the teacher in our opening example had explained this definition of an argument to students, the discussion about wearing masks might have gone more like this:

TEACHER: The district is requiring all students to wear masks because of the COVID pandemic. What do you think?

OLIVIA: I think it's a good idea. We should all wear masks.

TREVOR: I think everyone ought to be able to decide for themselves. They can't make us wear them.

TEACHER: Let's pause a moment. Olivia, you just stated a conclusion—that masks are a good idea. What statements led you to that conclusion?

OLIVIA: Well, doctors know a lot about health. All doctors want everyone to wear masks when they come into their offices. Masks must be a good idea.

TEACHER: I see. That's a reasonable argument. What about you, Trevor? What statements led to your conclusion?

TREVOR: This is a free country. In a free country, people can't be told how to live their lives. We have the right to decide for ourselves, so no one can tell us we have to wear masks.

TEACHER: Yes, I see how those statements would lead you to that conclusion.

Now, instead of spouting random conclusions, the students are demonstrating argumentative reasoning. They are clear about the definition of an argument, and the teacher is clear about helpful language to use to encourage critical thinking. The first step in critical thinking, then, is for students to be able to see the argument behind the messages they encounter (or express), whether the message is "We should have leftovers tonight" or "We need to ban handguns."



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But aren't some arguments better than others? That question leads us to the second step of critical thinking, evaluating arguments, a skill that involves two challenges.

Challenge 1: Do These Statements Lead to this Conclusion?

Students must also evaluate whether an argument's statements "add up." Think of it like a math problem:

$$2 + 2 = 4$$

Or, in Olivia's case:

*Doctors know about health. + Doctors want everyone to wear masks.
= Masks are a good idea.*

When we diagram a solid argument this way, students will realize the two statements must add up logically to this conclusion. They'll quickly figure out that there are multiple ways to get to a conclusion. For instance, Olivia could have said, "Children should be protected from COVID-19. Masks are good at stopping COVID-19. Therefore, we should all wear masks."

This approach helps clarify why not all arguments add up:

Masks are uncomfortable. + I hate wearing one. = Masks don't work.

Saying that masks are uncomfortable doesn't lead to the conclusion that they don't work. I've found students enjoy looking for such errors in logic in arguments.

Challenge 2: Are All the Statements True?

The next step is to examine which of the statements in an argument are true. Here's an argument that adds up, but in which not all the statements are true:

All teachers love "I Heart Teaching" coffee mugs. + Mr. Palmer is a teacher. = Mr. Palmer would love this kind of coffee mug.

If the first two statements were true, it *would* lead to the conclusion that I want yet another "I Heart Teaching" mug. But there's a false statement in there: We *don't* all

love teaching-themed coffee cups.

Consider whether the alternate argument Olivia made meets this second challenge. I doubt many people would consider her first statement—"Children should be protected from COVID-19"—untrue, but "Masks are good at stopping COVID-19" might prompt some pointed questioning. Is it undeniably true that masks are good at stopping COVID-19? Evidence to support this statement would strengthen Olivia's argument. This demands that teachers specifically teach students about *evidence* to help them meet this second evaluation challenge.

What Is "Evidence"?

I often ask teachers, "What would you tell a student who asks you what you're looking for when you say to add evidence?" Again, no two teachers ever have the same definition. I've heard, *facts, verifiable facts, quotes, information indicating truth, research-based proof, data, artifact that supports a conclusion*—and much more. Most teachers have never thought that they needed to provide a definition. *Evidence* is a common word, and we all know it has something to do with proving the truth of a statement, right?



“ Students need more specific instruction and a consistent definition of 'evidence.'

But how many of those responses make perfectly clear to the student what they should be looking for? Students need more specific instruction and a consistent definition. I tell students to look for five types of evidence. (I'll discuss in a bit how to guide students to evaluate a piece of evidence's legitimacy):

- Universally accepted truths. ("Concussions damage the brain.")
- Numbers. ("40 percent of retired NFL players have evidence of past brain injuries.")
- Examples. ("Aaron Hernandez of the New England Patriots had CTE, a disease found only in very old people and in people who got concussions.")
- Quotes from experts. ("Neuropathologist Bennet Omalu, said ...")
- Analogies. ("A helmet-to-helmet hit in football is like a head hitting the windshield of a car in a high-speed crash.")

Point out that universally accepted truths, numbers, and analogies tend to come from valid and peer-reviewed research. It's usually necessary to cite that research. "Concussions damage the brain" should be followed by "Here is the research behind that truth."

A teacher who has given students guidance like this list can be clear about what a student needs to provide to back up a statement that not everyone in the class accepts. For example: "Olivia, not everyone in class accepts that masks work.

Could you do some research and find some evidence for us?" After Olivia's had a couple days to do research, in a time set up to return to this discussion, she might tell the class, "Well, it's a fact that all surgeons wear masks during surgery. I also found a number: 38 percent of Americans think masks are good for protecting against COVID-19. And I have a quote from my dad about this. He said, 'Masks keep all the germs from going from a sick person to others.'"

Students don't need to provide all five types of evidence (or however many types of evidence a teacher identifies) to back up every statement. But they do need to know exactly what to look for when told to "find some evidence."

And just as not all arguments are equal, of course, not all evidence is valuable. I suggest teachers coach students in two ways of analyzing evidence:

- Consider carefully whether the evidence *really* backs up the statement. (The fact that 38 percent of Americans believe masks work doesn't *prove* masks work.)
- Think about the source of the evidence and credentials of those quoted (Is Olivia's dad an epidemiologist?). Talk with students about the difference between a source like [Mayoclinic.org](https://www.mayoclinic.org) and one like [@masklover](#) on Twitter—or an Internet meme of a supposed Einstein quote with no information about where Einstein said this and a citation from a book of Einstein's writings. In upper grades, point out the differences in political orientation and approach to news presentation between various media groups and sources (between, say, [cnn.com](https://www.cnn.com) and [foxnews.com](https://www.foxnews.com)) so students can think critically about bias.

Students Can Do Better!

Much of what any of us say is argument-based, but we fail to realize it—often because we only say/hear the *end* of some argument: *Grades should be abolished. Student loans should be forgiven. We should sell wrapping paper for a fundraiser.* Often, if our personal bias fits an idea, we say, "Yes, I agree," without really examining the idea. If we specifically teach the definitions shared in this article, our students will be able to do better than mindlessly agreeing or disagreeing. They will recognize the need to examine ideas. They'll insist on seeing the statements that lead to the conclusion presented, analyze how well-built the argument is, and realize when evidence is needed and how to evaluate it. In other words, they will be critical thinkers.

Reflect & Discuss

- Do discussions in your class typically follow the pattern Palmer describes at the start of the article, where students basically just state opinions? How might you change that?
- What steps could you take to help students formulate better arguments, whether in writing or speech?
- Do you agree that people today have become “unaccustomed to thinking deeply” and critically? If so, what problems does this create for students?



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