Building a Better Argument

Summary

Whether it’s an ad for burger chains, the closing scene of a “Law & Order” spinoff, a discussion with the parents about your social life or a coach disputing a close call, arguments are an inescapable part of our lives. In this lesson, students will learn to create good arguments by getting a handle on the basic structure. The lesson will provide useful tips for picking out premises and conclusions and for analyzing the effectiveness of arguments.

Objectives

In this lesson students will:

- Discover the basic terminology of arguments.
- Learn strategies for reliably distinguishing between premises and conclusions.
- Explore the differences between arguments and explanations.

Key Terms

- **Argument**: A conclusion together with the premises that support it.
- **Premise**: A reason offered as support for another claim.
- **Conclusion**: The claim being supported by a premise or premises.
- **Explanation**: A statement or set of statements designed to show why something is true rather than that it is true.

Background

Logic has been a formal academic discipline for almost 2,500 years now. The Greek philosopher Aristotle first systematized formal logic in the 4th century B.C.E., and university logic courses teach Aristotelian logic to this day. For much of western history, logic was one of the three legs of the trivium (or the classical curriculum, which consisted of grammar, logic and rhetoric). With the growth of more specialized disciplines and wider curricula in the 20th century, formal logic got lost in the shuffle. In its place, philosophers began formulating courses in what we now call critical thinking, or informal logic. Formal rules and the reduction of sentences to things like

\[ \forall x \exists y [Ax \supset (Qx \lor Rx) \cdot Sy] \]

are reserved for university logic courses. Critical thinking deals with ordinary language arguments, offering us tools for assessing those arguments without the need to learn complicated sets of rules for turning sentences into formal symbols.

Instructions

Make enough copies of student handouts #1 and #2 so that each student can have one.
Have enough blank 3×5 index cards on hand to pass out to everyone at the start of Exercise #3.

**Materials**

1. Monty Python, “The Argument Clinic”
2. Student handout #1, Finding Premises and Conclusions
3. Student handout #2, Argument Examples
4. Teacher handout #1, Argument Examples

**Exercises**

**Exercise #1 – Identifying Arguments**

*To the teacher: Students cannot really begin to analyze arguments until they become good at recognizing them. Many students are not very analytical to begin with, so they will require some help in identifying (a) that something is an argument and (b) what the various parts of the argument actually are.*

Most of what appears below also appears in condensed form on student handout #1 (except for the section on implied premises and conclusions), but you should go over it with your students. They can follow along on paper.

Pass out student handouts #1 and #2, Finding Premises and Conclusions, and Argument Examples. We then begin with some basic technical vocabulary.

**Premise:** a reason offered as support for another claim

**Conclusion:** the claim being supported by a premise or premises

**Argument:** a conclusion together with the premises that support it

So, to take the oldest example in logic, one that Aristotle used in teaching at his Academy:

1. All men are mortal.
2. Socrates was a man.
3. Therefore Socrates is mortal.

The three lines taken together constitute an argument. Line 3 is the conclusion. Lines 1 and 2 are premises. Now, there are a few important things to remember about arguments. First, arguments can be either really short (like the one about Socrates) or they can be really long (most op-eds are extended arguments; lots of books are really long extended arguments). But really long arguments will usually be broken down into series of shorter ones.
Second, it’s important to remind students that “argument,” as it is used in critical thinking, is not the same as what they have with, say, their parents when they stay out too late. A humorous (and pretty effective) way to make that point is to show the old Monty Python skit, “The Argument Clinic.” That skit also makes the point that having an argument doesn’t mean that your argument is any good. An argument might be such that its premises are false or irrelevant to the conclusion, or that they fail entirely to support the conclusion.

But before we can analyze arguments, we have to identify them. That, in turn, means identifying the premises and the conclusions. There are several strategies for doing so. The easiest is to examine the text for clues.

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<thead>
<tr>
<th>Premise Indicators</th>
<th>Conclusion Indicators</th>
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<tbody>
<tr>
<td>Since</td>
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<td>Follows from</td>
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<td>As shown by</td>
<td>Consequently</td>
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<td>Inasmuch as</td>
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<td>As indicated by</td>
<td>As a result</td>
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<td>The reason is that</td>
<td>Thus</td>
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<td>May be inferred from</td>
<td>For this reason</td>
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<td>May be derived from</td>
<td>For these reasons</td>
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<td>May be deduced from</td>
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Unfortunately, not all arguments will contain these helpful indicators, which means that we need some backup strategies. Another useful tool is paraphrasing, or taking a complicated argument and rewriting it to help us see what the claims really are. And finally, a really useful method is what one could call the 3-year-old approach. Read a sentence and ask, as 3-year-olds are inclined to do, “Why should I believe that?” Look at the rest of the passage and see if you can find anything that looks like an answer to the why question. If you find an answer, then the answer is a premise and the original claim (the sentence about which you asked why) is a conclusion. Repeat the process for each claim.

There is, unfortunately, one small complication. Not all arguments have all of the claims stated explicitly. Sometimes there are implied premises or conclusions. Consider the following argument:

You spilled it. Whoever makes the mess cleans up the mess.

What is clearly implied here is the conclusion: You clean up the mess. Now consider the following argument:

You should not eat that greasy hamburger. It is loaded with fat.

Again, there is something implied, but this time, what’s implied is a premise: You should not eat anything that is loaded with fat.

Finally, it is important to remember that sometimes arguments can have more than one conclusion. Look at the following argument:
Since yesterday’s editorial cartoon succeeded in making the mayor look silly, the cartoonist must have finally regained his touch. And the mayor probably won’t be reelected.

This argument can be thought of as having two different arguments in it. We can analyze it in the following way:

**Premise:** Yesterday’s editorial cartoon succeeded in making the mayor look silly.

**Conclusion:** The cartoonist has finally regained his touch.

And

**Premise:** Yesterday’s editorial cartoon succeeded in making the mayor look silly.

**Conclusion:** The mayor probably won’t be reelected.

**Exercise:** Look at the arguments on student handout #2, Argument Examples. Have the students identify the premises and the conclusions for each argument. Students can work individually or in small groups of 3 to 5 students. Ask the students to pick out which premises support which conclusions. After students have completed the task, have them report on their answers. Tell students to:

1. Remember to check for premise indicators (since, because, for, given that) and for conclusion indicators (therefore, consequently, so, thus).
2. Keep in mind the 3-year-old method. Read each statement and then ask “why?” Statements that answer why questions are premises. Statements that are supported by other statements are conclusions.
3. Finally, remember that sometimes premises and conclusions can be implied. In other words, sometimes the speaker/writer will assume that the reader can fill in the missing piece(s) of the argument.

**Exercise #2 – Arguments and Explanations**

*To the teacher: Some statements look a bit like arguments but aren’t. In particular, the difference between an argument and an explanation can be tricky. Both answer the question “why?” but do so in different ways. The premise of an argument answers the question, “Why should I accept this conclusion?” An explanation, on the other hand, takes the conclusion as a given – as a fact about the world – and then offers a story about why that particular thing is the case. This exercise will help students learn to distinguish the two.*

There are some who will tell you that everything really is an argument for something. In fact, one popular composition textbook is titled “Everything’s an Argument.” There’s just one problem with that claim: It’s false. The idea behind the “everything’s an argument” movement is that we always are trying to persuade someone of something. So when I explain something to you, I’m really trying to convince you that what I’m saying is true. When I say that a picture is beautiful, I’m trying to convince you of its beauty, for instance. There may be something to this
as a method for teaching writing, namely, when we write, we should be aware that we’re always trying to get the reader to do something, even if it’s just to share our point of view for the moment. But from the point of view of the logician, not everything is an argument. Remember our definition of an argument:

**Argument**: a conclusion together with the premises that support it.

Not all passages are of that sort. Sometimes we try to convince a person that something is true. Other times we want to explain why something is true. So we might contrast an argument with an explanation:

**Explanation**: a statement or set of statements designed to show why something is the case rather than that it is the case.

Consider the following exchange:

**Ms. Jones**: You didn’t turn in your homework, Katie.

**Katie**: My cat ate my homework.

Here Katie is offering an explanation for why it is that she failed to turn in her homework. Note that she is not trying to convince Ms. Jones that she failed to turn in her homework: Both Katie and Ms. Jones agree that Katie failed to turn it in. Instead, Katie is trying to tell Ms. Jones why she failed to turn it in. Katie is offering an explanation, not an argument. But now consider a similar exchange:

**Jason**: Why did I fail this course, Mr. Smith?

**Mr. Smith**: You didn’t turn in your homework, Jason.

**Jason**: My cat ate my homework.

Jason’s sentence is identical to Katie’s, but Jason’s sentence is best understood as offering an argument. Jason is claiming, implicitly at least, that he shouldn’t fail the class because his cat ate his homework. Although Katie’s and Jason’s sentences are the same, they are doing two entirely different things. In other words, it is Jason’s intentions that make his sentence an explanation. To determine what a passage is doing, we will often have to go beyond the words themselves and ask ourselves instead what it is that the author is trying to accomplish.

**Exercise**: Arrange the chairs in the class into a circle. Give each student a 3×5 index card. On one side of the card, students should write either an argument or an explanation. On the other side of the card, they should write “argument” or “explanation” (whichever is appropriate to their particular example). When everyone has finished writing, have students pass their cards to the person to their right. Students should read the card and decide whether they are reading an argument or an explanation. Have the students continue to pass their cards to the right until they
have read all the cards. (Alternatively, this activity can be done in small groups of 5 students each, with the activity ending after all the members of the group have shared their cards.)

After students have read all the cards, collect them and discuss the examples with the class. Students may find it frustrating that critical thinking doesn’t always provide clear-cut answers. But remind them that life is often complicated, and our language reflects that messiness. It may be unclear whether an example is an argument or an explanation. In such cases, one can look at the various possibilities. One can, for instance, say things like: “If this is an argument, then it’s a good (or bad) one because ____,” or, ”If this is an explanation, then it is a bad (or good) one because ____.”

About the Author

Joe Miller received his Ph.D. in philosophy from the University of Virginia. He is a staff writer at FactCheck.org, a project of the University of Pennsylvania’s Annenberg Public Policy Center. Prior to joining FactCheck, he served as an assistant professor of philosophy at West Point and at the University of North Carolina at Pembroke, where he taught logic, critical thinking, ethics and political theory. The winner of an Outstanding Teacher award at UNC-Pembroke and an Outstanding Graduate Teaching Assistant award at the University of Virginia, Joe has over 10 years of experience developing curricula. He is a member of American Philosophical Association and the Association for Political Theory.

Correlation to National Standards

National Social Studies Standards

X. Civic Ideals and Practices Social studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in a democratic republic.

Essential Skills for Social Studies

Acquiring Information

A. Reading Skills

1. Comprehension

2. Vocabulary

B. Study Skills

1. Find Information

2. Arrange Information in Usable Forms

C. Reference & Information-Search Skills
2. Special References

*D. Technical Skills Unique to Electronic Devices*

1. Computer

**Organizing and Using Information**

*A. Thinking Skills*

1. Classify Information
2. Interpret Information
3. Analyze Information
4. Summarize Information
5. Synthesize Information
6. Evaluate Information

*B. Decision-Making Skills*

*C. Metacognitive Skills*

**Interpersonal Relationships & Social Participation**

*A. Personal Skills*

*C. Social and Political Participation Skills*

**Democratic Beliefs and Values**

*B. Freedoms of the Individual*

*C. Responsibilities of the Individual*

**National Mathematics Standards**

*Process Standards*

Reasoning and Proof Standard
National Educational Technology Standards

Performance Indicators: All students should have opportunities to demonstrate the following performances.

2. Make informed choices among technology systems, resources, and services.

7. Routinely and efficiently use online information resources to meet needs for collaboration, research, publication, communication, and productivity.

8. Select and apply technology tools for research, information analysis, problem solving, and decision making in content learning.

Information Literacy Standards

Information Literacy

Standard 1 assesses information efficiently and effectively.

Standard 2 evaluates information critically and competently.

Standard 3 uses information accurately and creatively.

Social Responsibility

Standard 7 recognizes the importance of information to a democratic society.

Standard 8 practices ethical behavior in regard to information and information technology.

Standard 9 participates effectively in groups to pursue and generate information.

English Language Arts Standards

Standard 1 Students read a wide range of print and non-print texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary work.

Standard 3 Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).
**Standard 5** Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.

**Standard 6** Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts.

**Standard 7** Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

**Standard 8** Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

**Standard 12** Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).