Argument Skills and How to Teach Them

by Winston Sieck - June 10, 2013

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Argumentation is the thought process used to develop and present arguments. It is closely related to critical thinking and reasoning.

Argument skills belong among the essential 21st century cognitive skills. We face complex issues that require careful, balanced reasoning to resolve.

Perhaps for this reason, argumentative reasoning skills are now part of the “common core” for K-12. Yet, argumentation is not consistently taught. One reason is that argumentation may be viewed as a skill that develops naturally in the course of other studies. Another is that it may not be clear what exactly should be taught. What do good argument skills look like?

Deanna Kuhn and Amanda Crowell of Columbia University addressed these issues. They studied argument skills among 6th graders, including ways to teach them. Their paper, Dialogic Argumentation as a Vehicle for Developing Young Adolescents Thinking, appeared in Psychological Science.

So, what is good argumentation?

There seems to be some consensus that it is not what elementary students do naturally. Past research shows that students typically just say what they favor about one position. One researcher suggested that students too often only see argumentation as, “an exercise in which one strings together a set of reasonable-sounding statements, being careful not to include anything that anyone might challenge.”

Kuhn and Crowell defined some minimal standards for competent argumentation about complex issues:

- Using evidence to support the thought process.
- Figuring out the pros and cons of the different positions on an issue.
- Weighing those positives and negatives to reach a conclusion.

From these ideals, the researchers also put together a grading rubric for argumentation.

- Single perspective – what’s good about the favored position.
- Dual perspective – also includes cons of an opposing position.
- Integrative perspective – includes pros and cons of each position.

The dual perspective is considered a step up from the single because it requires two shifts in perspective. First, the student has to shift from thinking about pros to cons. They also need to shift from thinking only about their favored position to consider other alternatives.

The integrative perspective takes the argumentation a step further, as not all of the considered arguments
lead to the same conclusion. In this case, more nuanced thinking and weighing of the arguments is needed
to draw a conclusion.

Kuhn and Crowell tested a fairly intensive education program to build these argument skills. The
intervention was held as a class that met twice a week over 3 school years. Each quarter, the students
would be given a social issue to work with as a class. Examples of issues include homeschooling, China’s
one-child policy, teacher pay, and euthanasia.

Students were randomly assigned to either the argument skills program or a comparison group. The
comparison group also considered social issues, but did so in a more traditional individual writing format.
The argument skills program ran as an ongoing set of class debates. These were set up in a game format,
each with pregame, game, and endgame phases.

Pregame Phase

Each team worked together in small groups on preparation activities:

- Generating reasons why their position was the better one
- Formulating questions to get relevant evidence
- Evaluating and ranking the reasons according to their strength
- Anticipating how the other side might counter these reasons and planning for how to respond
- Anticipating what the other team’s reasons might be and planning rebuttals to those

Game Phase

Students were paired up for argument matches with the opposing team. Each match had two players on a
side who worked together to formulate arguments and counterarguments. The matches were held
electronically using Google Chat.

While a pair from one team waited for the other pair to respond to their last argument, they reflected on
one of the arguments seen so far (either theirs or their opponents). They tried to identify
counterarguments to these, and think about how they could be improved.

Endgame Phase

After all the pairs had finished the argument matches, they got ready for the final debate. First, they
reviewed the other sides’ arguments from the chat sessions, and planned better rebuttals. Then, they
looked at the counterarguments the other side used against their own arguments, and thought of ways to
come back against those. Finally, they engaged in a whole-class debate.

This thorough argumentation training program worked pretty well. Both the argumentation group and the
comparison group wrote individual essays in response to social issues in order to compare changes in
their reasoning patterns. They also wrote out questions about what they would want to know to inform
their thinking about the issue.

The training group got better over time, using more dual-perspective and integrative arguments.
Integrative arguments only started to appear in the third year, though.

The comparison group did not move past writing single perspective arguments. They did end write longer essays as the course progressed, consistent with their course emphasis on individual writing. There was no evidence that their argumentative reasoning skills would improve naturally over time.

The argumentation group also wrote out more questions and better question than the comparison group. In addition to being able to develop more nuanced, balanced arguments, they were better prepared to learn what they needed to help them reason through complex issues.

In terms of educating argumentation, Kuhn and Crowell’s program showed some initial success. It is certainly worthy of further study. It would be great to see if the argumentation training could be done more efficiently. Maybe elements of it could be integrated within current middle and high school courses.

If you are looking for a simple way to improve argumentation in your own classroom, you might use the list of pregame-prep activities as a student guide for building arguments. Have them try to take each side’s perspective, and think about how to integrate the different views.


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