Analyzing the Logic of an Article

To analyze thinking, we focus on its parts. In other words, we focus on the purpose of thinking, the questions the thinking is pursuing, the information being used, the assumptions and inferences being made, the concepts and point of view guiding the thinking, and its implications.

To evaluate or assess thinking, we apply intellectual standards to the parts of thinking, standards such as clarity, relevance, accuracy, significance, completeness, and logic. For example, we ask whether the purpose and question are clear, the information relevant and accurate, the inferences and implications logical, the assumptions and concepts justifiable, the point of view relevant.

When students can analyze and assess reasoning, they have skills essential to the educated person. In this column, we provide templates for students to use in analyzing and assessing reasoning in written form, the reasoning, for example, embedded in an article, essay, chapter, or textbook.

How to Analyze the Logic of an Article [modified for PHPH-101 Introduction to Public Health]

One important skill for understanding an article is through the analysis of the parts of the author’s reasoning. Once you have done this, you can then evaluate the author’s reasoning using intellectual standards. Here is a template to follow.

1) The main purpose of this article is ______________________. (Here you are trying to state as accurately as possible the author’s purpose for writing the article. What was the author trying to accomplish?)

2) The key question that the author is addressing is __________________________. (Your goal is to figure out the key question that was in the mind of the author when s/he wrote the article. In other words, what was the key question that the article addressed?)

3) The most important information in this article is ___________________________. (You want to identify the key information the author used, or presupposed, in the article to support his/her main arguments. Here you are looking for facts, experiences, data the author is using to support her/his conclusions).

4) The main inferences/conclusions in this article are ________________. (You want to identify the most important conclusions that the author comes to and presents in the article).

5) a) If we take this line of reasoning seriously, the implications are ___________. (What consequences are likely to follow if people take the author’s line of reasoning seriously? Here you are to follow out the logical implications of the author’s position. You should include implications that the author states, if you believe them to be logical, but you should do your best thinking to determine what you think the implications are.)

   b) If we fail to take this line of reasoning seriously, the implications are _____________. (What consequences are likely to follow if people ignore the author’s reasoning?)

6) The question(s) I have after reading the article is (are) __________________________. (What question(s) is (are) raised or implied by the author or inferred by you but not answered or addressed?)

If you truly understand these structures as they interrelate in an article, essay, or chapter, you should be able to empathically role-play the thinking of the author. Remember, these are the 8 basic structures that define all thinking. They are the essential element of thought.
How to Evaluate an Author’s Reasoning [modified for PHPH-101 Introduction to Public Health]

Once you have accurately identified the parts, or elements, of an author’s reasoning you are then ready to assess those parts to determine the quality of the author’s reasoning. Use the following guides to do so:

1. Focusing on the author’s Purpose: What is the purpose of the reasoner? Is the purpose well stated or clearly implied? Is it justifiable?

2. Focusing on the key Question which the written piece answers: Is the question at issue well stated (or clearly implied)? Is it clear and unbiased? Does the expression of the question do justice to the complexity of the matter at issue? Are the question and purpose directly relevant to each other?

3. Focusing on the most important Information presented by the author: Does the writer cite relevant evidence, experiences, and/or information essential to the issue? Is the information accurate and directly relevant to the question at issue? Does the writer address the complexities of the issue?

4. Focusing on the most important Inferences or conclusions in the written piece: Do the inferences and conclusions made by the author clearly follow from the information relevant to the issue, or does the author jump to unjustifiable conclusions? Does the author consider alternative conclusions where the issue is complex? In other words, does the author use a sound line of reasoning to come to logical conclusions, or can you identify flaws in the reasoning somewhere?

5. Focusing on Implications: Does the writer display a sensitivity to the implications and consequences of the position s/he is taking?

Conclusion

In this article, we have provided a template useful in helping students practice analyzing and assessing reasoning. When we ask students to read an article, we should provide structures that enable them to understand and evaluate its basic logic. The template described in this column can be invaluable in doing just that. This template, which is used by faculty in multiple disciplines, places the burden of thinking through the content on the student where it should be and can be used routinely throughout a course. When using it, we strongly recommend that faculty work through this template themselves, so that they can better help students learn to analyze and assess the reasoning embedded in written material.