

Explicitly Teach Critical Thinking in Your Discipline

Many of our students "have grown up getting good grades while doing little homework and consequently don't expect to have to put forth much effort in college. They are accustomed to studying and learning at a shallow level" (Nilson, 2013, p. 110). However, learning in a discipline "requires explicit methods and strategies for thinking through content" (Paul & Elder, 2019, p. 5).

"All thinking occurs within, and across, disciplines and domains of knowledge and experience, yet few students learn how to think well within those domains. . . . They use words and ideas, but do not know how to think ideas through and internalize foundational meanings. They . . . cannot make connections," but critical thinking can improve through "disciplined analysis and assessment" (Paul & Elder, 2019, p. 16).

Students require guidance for this learning process. Unfortunately, many of our students read the prompt for their assignment and write their papers before reading scholarly sources. Then, they insert quotes to shore up their claim. They may not truly engage in critical reading and thinking because their former method has been so successful for grades in the past.

Teach Students to Think Critically

First, define critical thinking for your students. You might use some of the following ideas:

- Accurately and thoroughly interprets evidence, statements, graphics, questions, literary elements, etc.
- Asks relevant questions.
- Analyzes and evaluates key information, and alternative points of view clearly and precisely.
- Fair-mindedly examines beliefs, assumptions, and opinions and weighs them against facts.
- Draws insightful, reasonable conclusions.
- Justifies inferences and opinions.
- Thoughtfully addresses and evaluates major alternative points of view.
- Thoroughly explains assumptions and reasons.

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Use Writing to Develop Students' Critical Thinking Skills

The act of writing requires students to focus and clarify their thoughts before, during, and after putting them on paper. Writing converts students from passive to active learners and requires them to identify issues and formulate hypotheses and arguments (Gocsik, 2002).

Practical Activities for Helping Students Learn to Think Critically in Your Discipline

Model your own critical thinking process or consider using one of the following activities:

- Consider assigning a pertinent scholarly article or chapter from your text
 - Give students 15 minutes in class to meet in small groups
 - Group members should NOT summarize the readings!!!
 - Provide a list of critical thinking questions about the text and have students choose 2-3 of the
 questions & use the time to discuss the responses to the questions [refer to the list of template
 questions to create your own relevant questions]
- Either assign 2 scholarly articles or have students use 2 articles that they plan to use for their paper
 - Provide a list of questions and have students respond to them in writing [see the template for creating your relevant questions]
- Give students raw data and ask them to write an argument or analysis based on the data
- Consider requiring students to submit their thesis & the intro or one section of their paper so you can verify that they are on the right track
 - After that, you could require students to exchange subsequent drafts with members of a small group & provide questions to guide peers in their analyses of the thinking in the paper [do NOT have peers review grammar, documentation style, punctuation, etc. – simply have peers analyze the thinking (the other types of reviews use different parts of the brain and can occur closer to the time the paper is due); this activity does not need to be in-class]

Below are some template generic question stems that can serve as prompts to generate critical thinking questions. If we want students to generate good questions on their own, we need to teach them how to do so by providing them with the structure and guidance of example questions.

- What are the strengths & weaknesses of...?
- What is the difference between... and ...?
- Explain why/how ...?
- What would happen if ...?
- What is a new example of ...?
- How could ... be used to ...?
- What are the implications of . . .?
- What do we already know about ...?
- How does ... affect ...?
- What is another way to look at ...?

- What does ... mean?
- Why is ... important?
- How are ... and ... similar/different?
- How does ... apply to everyday life?
- What is a counterargument for ...?
- What is a solution to the problem of ...?
- What do you think causes ...? Why?
- What evidence is there to support your answer?
- How does ... tie in with what we have learned before? (uwaterloo.ca)

Resources

Gocsik, K. (2002). Teaching Critical Thinking Skills. UTS Newsletter, 11(2):1-4

Nilson, L. (2013). Creating self-regulated learners: Strategies to strengthen students' self-awareness and learning skills. Stylus Pub.

Paul, R, & Elder, L. (2019). *The thinker's guide for students on how to study & learn a discipline*. Rowman & Littlefield. https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/developing-assignments/cross-discipline-skills/promoting-assessing-critical-thinking

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