Critical Thinking
in Your Classroom

Inquiry ARC workshop

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Everyone thinks of changing the world, but no one thinks of changing himself.  
Leo Tolstoy

Individuals often think more about ways to change the world rather than ways to change themselves.  
Mary Lynn Manns
Intro

- Who is this person in the front of the room?
- When have your students used poor critical thinking skills?
- What we will (and won’t) do today
  - An introduction to 11 exercises to help your students improve their thinking
  - Only a taste... will introduce the exercises... and then leave it to your imaginations!
Critical thinking is not an add-on to course content because effective critical thinking will help students think through and reason about (rather than just memorize) the content.
The exercises we will do today will....

Help students to intentionally and explicitly think about their thinking so they can improve it (and continue this on their own)
Inquiry ARC

Inquire (I)
Inquire refers to the process of identifying an issue or concept to explore in a project. It is a *question-driven* search for understanding that requires asking relevant and probing questions from *multiple perspectives* and gathering information from a variety of sources (literature, experts, communities, or individuals). The critical thinker considers the significance of a topic, comes to a *clear* and *accurate* understanding of the topic, *logically analyzes* information, and concludes by crafting a specific question or concept to explore.
Inquiry ARC

Apply (A)
Apply refers to the process of designing and implementing a project that is identified during inquiry and results in a product (e.g., oral presentation, paper, film, poem, experimental design, marketing campaign, installation, program, or musical composition).

The critical thinker articulates a purpose, distinguishes assumptions and points of view from concepts and information, and uses well-reasoned interpretation to identify fallacies. The critical thinker is able to identify conclusions and analyze how they relate to supporting premises. In acting on this purpose by designing and implementing a project, the learner considers implications and consequences of continued inquiry before accepting or formulating an opinion or conclusion.
Inquiry ARC

Reflect (R)
Reflect refers to the practice of periodically reviewing, evaluating, and deepening learning. The critical thinker evaluates in writing what has been learned from the project and thereby internalizes core meanings and fundamental concepts. In addition, the learner internalizes the intellectual skills used during the learning process, which contributes to a deeper understanding of the issue, the ability to connect it to one’s own life, and an enhanced ability to engage in critical thinking in the future.
Inquiry ARC

Communicate (C)

Communicate refers to the process of sharing what one has learned orally, visually and/or in writing. The critical thinker **effectively communicates** what has been learned to a teacher or mentor (and possibly others) and in so doing, further **internalizes** the knowledge gained.
The Critical Thinking Framework

<<critical thinking>> APPLY INTELLECTUAL STANDARDS:

Clarity  Depth
Accuracy  Breadth
Precision  Logic
Relevance  Significance
Fairness  etc.

TO
<<thinking>> ELEMENTS OF REASONING (purpose, question, information, interpretation and inference, concepts, assumptions, implications and consequences, point of view, etc.)

<<why>> IN ORDER TO: Improve quality of reasoning

THIS RESULTS IN THE DEVELOPMENT OF INTELLECTUAL TRAITS:

Intellectual humility
Intellectual courage
Intellectual empathy  (relates to our Global & Cultural Understanding)
Intellectual autonomy
Intellectual integrity
Intellectual perseverance
Confidence in reason
Fairmindedness
Exercise #1

What is your **PURPOSE** for being in this workshop?

0 Is your statement **accurate**?
0 Does your statement **relate** to what we are going to do here?
0 Did you have all the accurate **information** you need to write your statement?
0 Is your purpose a **significant** one?
0 Does your statement have the appropriate **breadth** and **depth**?
0 Is your statement **logical**?
0 Is your statement **clear**?
Exercise #2

What **intellectual standards** can you evoke in each of the following to help the speaker think critically?

(Elements of reasoning are in red)

**Question:** What question should we explore?

*Why did they mess up the playground again?*

**Information:** What do you know?

*All the low income areas I see are messy.*

**Assumptions:** What is shaping your point of view?

*Poor people just don’t care about their homes.*

**Implications:** What are the consequences of your reasoning?

*We should never do anything for them again.*
Exercise 3
Practicing your own CT

My goal:
I want students thinking every moment they are in class.

- Is this clear?
- Is this precise?
- What are the complexities of this?.. (depth)
- Is this goal relevant to the issues I have in the classroom?
- Is this a significant goal?
- Is this a fair goal?
- Etc...
Exercise #4

A little more about Clarity

Which intellectual trait do you think is most important?

- State
- Elaborate
- Example
- Illustrate
Exercise #5

Using the CT framework in grading writing assignments

- Students are taught the CT framework
- Paper is graded by using vocabulary in this framework
- Can be used for grading:
  - Research papers
  - Experience reports
  - Reflections
  - What else?
Exercise #6
Using the CT framework in grading writing assignments

- Before class:
  - Students complete a reading assignment
  - Students write a short position paper to address a particular question (example: 2-page double spaced)

- In class:
  - Small group work: Each student reads his/her paper aloud and gets feedback based on intellectual standards. Other students must make suggestions for improvement.
    - Clear?
    - Relevant?
    - Accurate?
    - Etc...
The Critical Thinking process does not consider just the \textit{what} but also the \textit{why}.
I believe <this> and I can explain \textit{how} I got to this conclusion.
Exercise #7

Examining Your Point of View

You need to think critically about your point of view while striving to understand the views of others.

- Write one sentence with your opinion and your reason
- Each person will write the sentence on a whiteboard
- Examine places where people agree
- Examine places where people disagree
- For each item of disagreement, ask the participants to discuss his/her point of view in writing the statement. For example, was it from the point of view of discipline (Economist, Psychologist, Health & Wellness, Management), or the point of view of weight issues you may or may not have struggled with, or your political leaning, or....
Exercise #8

Other Points of View

0 Choose a point of view that is different from yours and...
  0 Write about it, and/or...
  0 Debate it, and/or...
  0 Play that role in the “6 hats” exercise, and/or...
  0 Write a skit about it, and/or...
  0 Other ideas?
Exercise #9

Barriers To Your Thinking

0 Write a strong bias you have about education.

0 How has this belief developed in you?

0 How does this bias stifle your critical thinking?

0 How would your teaching life be different if you could eliminate this bias?
The critical thinker...

- Has sufficient evidence to back-up the belief
- Can articulate and evaluate
- Is willing to look for things that are against his/her belief
- Focuses on relevant information
- Draws conclusions that are supported
- Presents evidence clearly and fairly
Exercise #10
Socratic Questioning

0 To continually seek a deeper answer (one that is more accurate, more relevant, more clear, etc.)

0 To encourage the process of discovery (rather than giving someone the answers)

0 To understand what we are thinking, how we got there and what influenced us
Exercise #11

How can I improve CT when I use the *Inquiry ARC* framework?

Inquire-Apply-Reflect-Communicate

- Write alone
- Compare with one other person
- Discuss with another team (4 people)
- Think about it for 3 minutes (no writing)
- Write your update
- Report to group (if you wish)
Thank you very much for the hard work you did today.