



METACOGNITION AND REFLECTIVE THINKING PRACTICES

New Faculty Orientation

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Reflection is a tool for learning.

Reflection is a tool for improving teaching.

Reflection helps students “to assess which skill and knowledge sets apply in...
novel situations and which do not....it is metacognition that endows writers
with a certain control over their work.”

~ Howard Tinberg, “Metacognition Is Not Cognition,” in *Naming What We Know*



INTRODUCTIONS...

A BIT ABOUT OUR STORIES...

Theories of Intelligence



Theories of Intelligence

☐ Strongly Agree ☐ Agree ☐ Somewhat Agree ☐ Somewhat Disagree ☐ Disagree ☐ Strongly Disagree

1. You have a certain amount of intelligence, and you can't really do much to change it.
2. Your intelligence is something about you that you can't change very much.
3. No matter who you are, you can significantly change your intelligence.
4. To be honest, you can't really change how intelligent you are.
5. You can always substantially change how intelligent you are.
6. No matter how much intelligence you have, you can always change it quite a bit.
7. You can change even your basic intelligence level considerably.

You Can Grow Your Brain

Many people think of the brain as a mystery. We don't often think about what intelligence is or how it works. And when you do think about what intelligence is, you might think that a person is born either smart, average, or dumb—either a “math person” or not—and stays that way for life.

But new research shows that the brain is more like a muscle—it changes and gets stronger when you use it. Scientists have been able to show just how the brain grows and gets stronger when you learn.

Everyone knows that when you lift weights, your muscles get bigger and you get stronger. A person who can't lift 20 pounds when they start exercising can get strong enough to lift 100 pounds after working out for a long time. That's

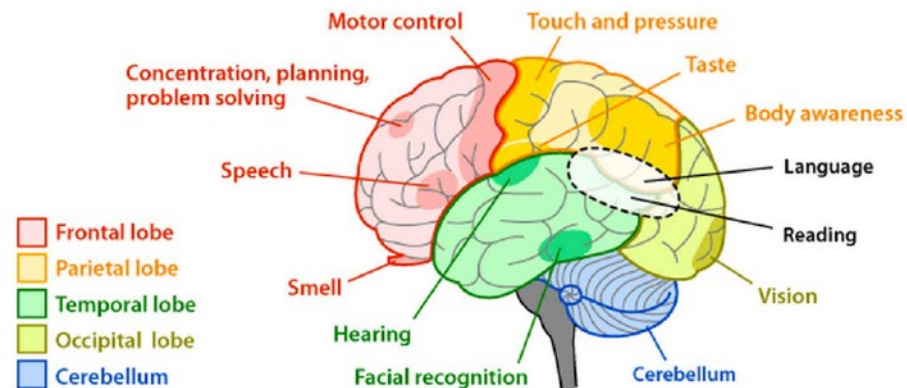
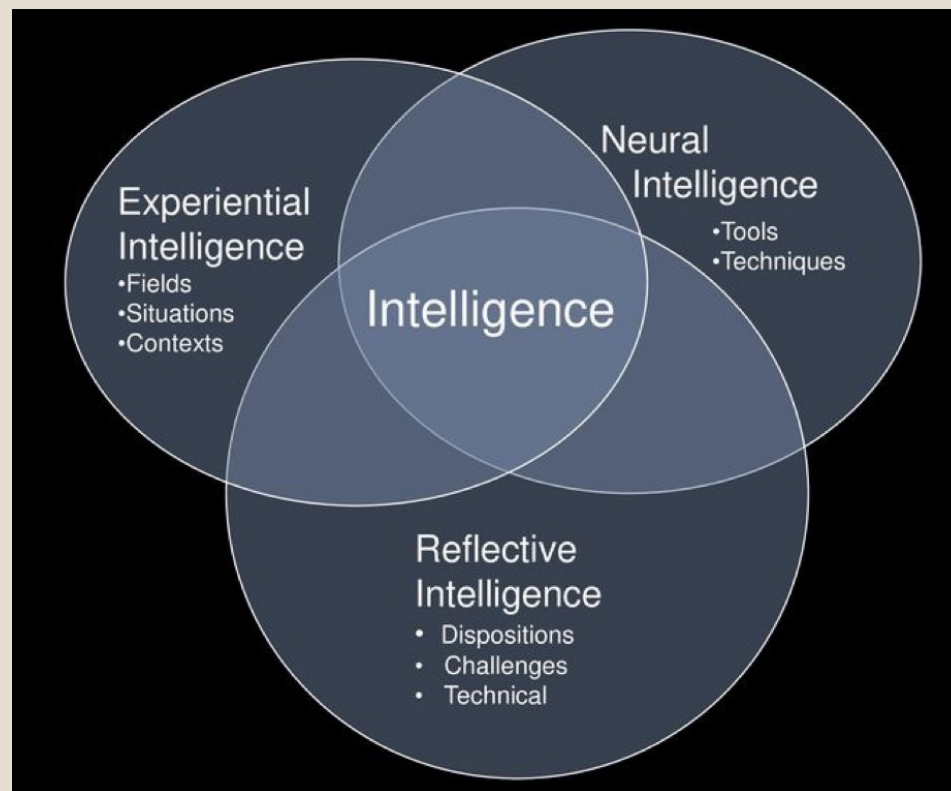


Figure 1 - Image of the human brain, color coded by lobe of the cortex and cerebellum. Regions associated with particular functions are also indicated. Image source: <http://askabiologist.asu.edu/what-your-brain-doing>

Mindware and the Metacurriculum



Theories of Intelligence

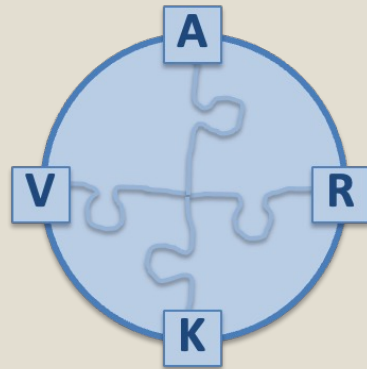
In groups, compose a short letter to a friend that has been struggling with school. This friend used to do pretty well in school, but now is having a hard time and as a result feels kind of dumb. Based on what we've learned from these articles, provide them some encouragement and suggestions for the future.

Reflective Journals/Essays

- Identify your VARK leaning style:

<http://vark-learn.com/the-vark-questionnaire/>

- Describe how you typically prefer to learn the material. Does this align with the results of the VARK questionnaire? Will you change your study strategies?



Visual — Prefer diagrams and pictures, use of colors/highlighting. Condense & redraw notes as diagrams etc...

Aural — Prefer hearing information. Listen, discuss & explain. Imagine answering questions as a conversation.

Read/Write — Prefer the written word. Condense notes into lists or statements. Rewrite notes.

Kinesthetic — Prefer models and applications of information, practical demonstrations. Focus on examples.

Exam Wrappers

For the following questions, indicate how much you agree with the statement.

1. Since the last exam, I have typically done the textbook reading before lectures on the material.

A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree E. Strongly disagree

2. Since the last exam, I have attended lecture almost all the time.

A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree E. Strongly disagree

3. Since the last exam, I have done the homework consistently, without looking up answers online or resorting to repeated rounds of guessing.

A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree E. Strongly disagree

4. I know how I should effectively study/prepare for exams in this class.

A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree E. Strongly disagree

Writing is a knowledge-making activity

“We don’t simply think first and then write. We write to think.”

~Heidi Estrem, “Writing Is a Knowledge-Making Activity” in *Naming What We Know*

Writing can lead to new insights.

Reflections are dedicated thinking-time.

Reflections & the Curse of Knowledge

Choose a writing assignment that you've seen students struggle with. It might be a full-blown writing project or a short response in an exam.

Imagine you are completing that same assignment. Focus on on the content, but on *how you construct* the piece of writing. Take some notes:

- What are the key moves you need to make?
- How do you organize it?
- What are the steps in your revision and editing processes?

Writing and Metacognition

Students don't often reflect on how or why they created, processed, or wrote something as they did. They may be using writing and thinking moves that have become second nature, *even if they aren't useful or applicable to the current situation.*

Reflection after an initial draft:

- What sections or moves did you include in the introduction of your report?
- Why did you choose to include them? What function do they serve?
- Compare the moves you made to the sample intro provided by the prof. How do they differ?
- What changes, if any, will you make to this section in your next draft.

Reflection encourages better work.

After guided reflection:

- Writers can adjust and adapt as they understand where, how, and why things went wrong, or store new tools and moves into their long-term memories for use in future situations.
- Writers who reflect often make “deeper choices” and are more likely to revise.

Examples from COMP 200: Research & Composition

1. I asked you to locate six sources of specific types and from specific platforms. What have you learned or practiced regarding *the tools for **locating** research*, including elements such as: keywords, library databases, filters, googling, using local resources, and working with a librarian? Use at least one specific example from your own work to explain.
2. What have you learned or practiced regarding the process of **assessing** *the ethos or credibility of sources and locating a diversity of perspectives*? Please reference specific concerns or approaches we have reviewed in class and describe at least one specific example from your own work as you explain your practice.
3. What have you learned or practiced **regarding interacting with research** in more sophisticated ways? Think about the writing tools we worked with, like *synthesizing, forwarding, and countering*; balancing your voice with research; and attributing sources. Where do you think you improved or excelled? What do you still need to practice? Point to examples in your writing.

How You Read Now

Please complete this survey AFTER reading chapters 2 and 3 of How We Read Now.

Hi, Amy. When you submit this form, the owner will see your name and email address.

1. In what medium did you read Chapter 2?



☐ Physical book

☐ Printed chapters

☐ Electronically, on a screen

2. Approximately how much time in total did you spend reading chapters 2 & 3



☐ 10 to 20 minutes

☐ 21 to 30 minutes

☐ 31 to 40 minutes

☐ More than 40 minutes

3. What technologies were present in the room while you were reading?



☐ Your phone, switched on

☐ A television

☐ An internet enabled laptop or desktop computer

☐ A gaming console

Reflection on Reading Habits

- ENGL 248: Living Literacy

- Survey of student approaches to their own reading of a chapter about reading strategies.

- <https://forms.office.com/r/fcxkhsWNy9>

Reflection on Textual Research Habits

Researching Your Research Experience

1

Which of the KU Library Databases have you used?
Check all that apply.



- ☐ Academic Search Ultimate
- ☐ ProQuest
- ☐ JStore
- ☐ Academic Video Online
- ☐ Science Direct
- ☐ Another discipline-specific database
- ☐ What are these databases you speak of?

◦ Survey used in a variety of classes in which I assign a researched project.

◦ <https://forms.office.com/r/s23yxgFvTi>

Assigning Reflections

- We need to teach and guide reflection—students don't inherently know how best to reflect.
- Ask students to reflect in the *early stages* of a project as well as at the end.
- Identify the critical learning moments you want students to focus on
 - Example: study habits, taking notes during class, exam performance, writing moves, genre conventions, processes
 - Review your SLOs if stuck
- Identify areas that will help your students address their learning behaviors

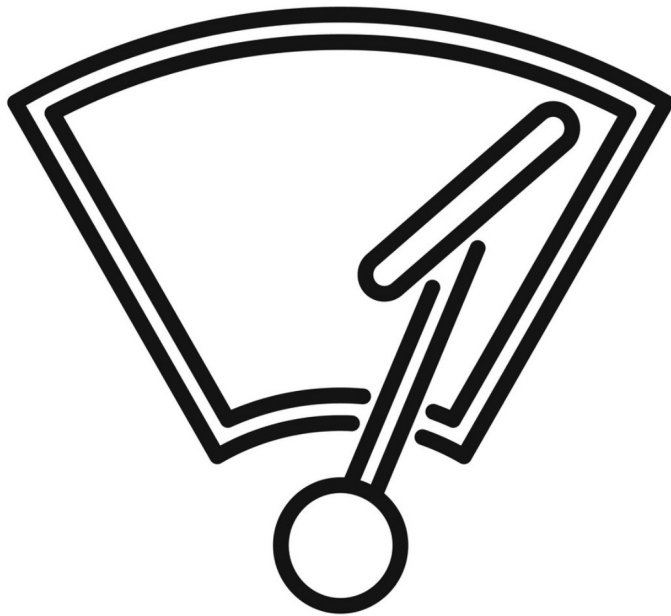


Assessing Reflections

- Focus on the big picture
- Acknowledge process limitations
- Provide feedback with the goal of making the student open up on the next reflection
- Remember that thinking is messy and so reflections may be messy, too.



A



Muddiest Point

- Consider what we covered during today's lecture (or anything from orientation).
- List one thing you knew before class, one thing you learned during class, and one thing you still are unsure of.
- Discuss this list with your neighbors. Specifically, see if a neighbor can answer any questions you still have about the material!



THANK YOU!

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