

## “My Students Won’t Read!”

CT2 Institute discussion & ideation session with Dr. Bridget Trogden, Associate Dean,  
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### I.) Background and My Story

A.) Example 1 – Guided Reading Example (1000-level course, First-year

Integrative Seminar)

B.) Example 2 – Double Entry Journal (3000-level course, Chemistry

Seminar)

C.) Example 3 – Perusall (8000-level course, Teaching Undergraduate

Science)

### II.) Discussion, Ideation, and Hive Mind

A.) What is it that our students don’t do that we wish they would do?

B.) What are the things we can do to help them do those things? (Locus of control)

## Guided Reading for The Allegory of the Cave - Plato

A guided reading assignment is designed to help you think critically and metacognitively about a text. We will be doing guided readings a few times this semester.

As you read The Allegory of the Cave, you are given a series of places to pause and reflect. At every pause point, write a pause symbol (2 vertical or horizontal lines: —or “) and the corresponding pause # in your text. These will be important markers for our classroom discussion time. You are then to answer each writing prompt in your learning log by writing at least a few sentences. You then continue reading until you hit the next pause prompt, then stop, think, write. Continue this cycle until you complete both the text and the writing assignments.

Start – custom textbook page 42

Pause 1: end of paragraph 1 (p. 42)

Writing Prompt: Draw a picture of the cave as it is described thus far. Your artistic skills don't have to be great, but try to include as much detail as possible.

Continue reading.

Pause 2: end of paragraph 14 (p. 42)

Writing Prompt: What does it mean to only see shadows? How does this contribute to the allegory?

Continue reading.

Pause 3: end of paragraph 18 (p. 43)

Writing Prompt: What happens now, when the prisoners get up? What is painful about it?

Continue reading.

Pause 4: end of paragraph 25 (p. 43)

Writing Prompt: How is the prisoner learning to see?

Continue reading.

Pause 5: end of paragraph 34 (p. 44)

Writing Prompt: What is Plato saying about returning to darkness once one is in the light?

Continue reading.

Pause 6: end of paragraph 35 (p. 45)

Writing Prompt: Plato finally explains the allegory. How does his explanation match with what you have written thus far?

Continue reading.

Pause 7: end of paragraph 41 (p. 45)

Writing Prompt: What are the 2 sources of blindness, and how are we to understand those who are blind?

Continue reading.

Pause 8: end of paragraph 46 (p. 45)

Writing Prompt: This section, between pause 7 and pause 8, is very important. What is Plato's argument about knowledge?

Continue reading.

Pause 9: end of paragraph 53 (p. 46)

Writing Prompt: What is Plato saying about human nature?

Continue reading.

Pause 10: mid-way through paragraph 61 (p. 47) after the words "...and good in their truth."

Writing Prompt: What is the obligation of the enlightened to those who are still in the dark?

Continue reading.

Pause 11: at the end of the text, after paragraph 68 (p. 47)

Writing Prompt: How does Plato tie up his allegory? What is his thesis? His conclusion?

One final writing prompt (#12): How does the text The Allegory of the Cave connect to the theme of education that we are currently studying in our course?

And now, I said, let me show in a figure how far our nature is enlightened or unenlightened: --Behold! human beings living in a underground den, which has a mouth open towards the light and reaching all along the den; here they have been from their childhood, and have their legs and necks chained so that they cannot move, and can only see before them, being prevented by the chains from turning round their heads. Above and behind them a fire is blazing at a distance, and between the fire and the prisoners there is a raised way; and you will see, if you look, a low wall built along the way, like the screen which marionette players have in front of them, over which they show the puppets. 1

I see.

And do you see, I said, men passing along the wall carrying all sorts of vessels, and statues and figures of animals made of wood and stone and various materials, which appear over the wall? Some of them are talking, others silent. 3

You have shown me a strange image, and they are strange prisoners.

Like ourselves, I replied; and they see only their own shadows, or the shadows of one another, which the fire throws on the opposite wall of the cave? 5

True, he said; how could they see anything but the shadows if they were never allowed to move their heads?

And of the objects which are being carried in like manner they would only see the shadows? 7

Yes, he said.

And if they were able to converse with one another, would they not suppose that they were naming what was actually before them? 9

Very true.

And suppose further that the prison had an echo which came from the other side, would they not be sure to fancy when one of the passers-by spoke that the voice which they heard came from the passing shadow? 11

No question, he replied.

To them, I said, the truth would be literally nothing but the shadows of the images. 13

That is certain.

And now look again, and see what will naturally follow it' the prisoners are released and disabused of their error. At first, when any of them is liberated and compelled suddenly to stand up and turn his neck round and walk and look towards the light, he will suffer sharp pains; the glare will distress him, and he will be unable to see the realities of which in his former state he had seen the shadows; and then conceive some one saying to him, that what he saw before was an illusion, but that now, when he is approaching nearer to being and his eye is turned towards more real existence, he has a clearer vision, - what will be his reply? And you may further imagine that his instructor is pointing to the objects as they pass and requiring him to name them, -will he not be perplexed? Will he not fancy that the shadows which he formerly saw are truer than the objects which are now shown to him? 15

Far truer.

And if he is compelled to look straight at the light, will he not have a pain in his eyes which will make him turn away to take and take in the objects of vision which he can see, and which he will conceive to be in reality clearer than the things which are now being shown to him? 17

True, he now

And suppose once more, that he is reluctantly dragged up a steep and rugged ascent, and held fast until he 's forced into the presence of the sun himself, is he not likely to be pained and irritated? When he approaches the light his eyes will be dazzled, and he will not be able to see anything at all of what are now called realities. 19

Not all in a moment, he said.

He will require to grow accustomed to the sight of the upper world. And first he will see the shadows best, next the reflections of men and other objects in the water, and then the objects themselves; then he will gaze upon the light of the moon and the stars and the spangled heaven; and he will see the sky and the stars by night better than the sun or the light of the sun by day? 21

Certainly.

Last of he will be able to see the sun, and not mere reflections of him in the water, but he will see him in his own proper place, and not in another; and he will contemplate him as he is. 23

Certainly.

He will then proceed to argue that this is he who gives the season and the years, and is the guardian of all that is in the visible world, and in a certain way the cause of all things which he and his fellows have been accustomed to behold? 25

Clearly, he said, he would first see the sun and then reason about him.

And when he remembered his old habitation, and the wisdom of the den and his fellow-prisoners, do you not suppose that he would felicitate himself on the change, and pity them? 27

Certainly, he would.

And if they were in the habit of conferring honours among themselves on those who were quickest to observe the passing shadows and to remark which of them went before, and which followed after, and which were together; and who were therefore best able to draw conclusions as to the future, do you think that he would care for such honours and glories, or envy the possessors of them? Would he not say with Homer, 29

*Better to be the poor servant of a poor master, and to endure anything, rather than think as they do and live after their manner?*

Yes, he said, I think that he would rather suffer anything than entertain these false notions and live in this miserable manner.....

## DOUBLE-ENTRY JOURNAL

This activity for students is called a double-entry journal. On the left side of a page, students take some notes based upon what they encounter in the text and on the right, they respond by asking questions, writing down ideas, drawing connections, providing insights, etc. Such an assignment is frequently used

- to help students understand and connect to difficult or technical material
- to help students make use of knowledge transfer from one concept to another

### Basic Example:

| <u>Article</u>   | <u>Thoughts</u>   |
|--|---|
| Studies report a heat-induced increase in ATP metabolites                    | Does this mean that cellular processes are still going on, or is it because of degradation? |
| "This present study aims to elucidate the chemical and sensory fate of IMP." | Imp! Focus of the paper!  |
| Data - measure of sensory attributes.  | These measurements seem subjective. Bias in data analysis?                                  |

### Description given to students:

You will be submitting a Double-Entry Journal frequently in this course as part of your Weekly Homework Assignment. (The assignments will be posted on Canvas every week.) This journal is intended to help you focus while you are reading each week's required literature by compelling you to organize your understanding of the paper and what questions you might have.

### Other expectations:

- To be done in your course notebook.
- At the top of the page, include your name, the date you wrote your journal, and the citation for the paper/book/etc. according to *The ACS Style Guide*.
- For each text you read, make at least 7 double entries. Two of these should include questions/terms that you looked up.
- These journals are not formal writing (proper sentence structure, punctuation, etc.), but they must be legible.

# Perusall Readings for Module 3

✓ Published

 Edit

⋮

## Purpose

From the course syllabus: You will have online readings and discussions to complete in Perusall for course modules 1-5. Each reading will consist of one or more articles and will be framed by discussion prompts. As you read, you will need to annotate the document to reflect your interpretation of the content. Your comments should be distributed across the readings for that week, should be of sufficient length to be clear, and should be written in a scholarly manner.

## Criteria

The grading rubric for the assignment can be located in the page [Accessing and Using Perusall](#).

## Task

This assignment will be completed in Perusall. Please read the page [Accessing and Using Perusall](#) before you begin the assignment.

### Assignment Instructions

- Read the discussion prompts at the bottom of this page.
- Read the articles, which have been posted into Perusall for you. As you read, think about the discussion prompts and also about new understandings or questions the articles raise. Highlight relevant sections within the article that you think are noteworthy. Post reflections as direct 2- to 3-sentence responses to at least 7 of the sections you highlighted. I encourage you to respond to the posts of your reading group members as well.
- The discussion prompts are the framework for your reflections. You are not expected to directly respond to or address every one.
- You do not have to read and annotate all of the articles for this week's reading assignment in one sitting. (In fact, multiple sittings might be better for many of you!)
- Make sure your comments are distributed across the articles.
- Refer to the [Accessing and Using Perusall document](#) to review the criteria by which your work will be evaluated. Note that the evaluation criteria say nothing

about CORRECTNESS of thought, but rather about DEPTH of thought, and that they emphasize quality over quantity in your responses.

## Article for Module 3

(Please note, the bibliographic information is provided here for the sake of completeness. You will access the readings and do your reading and responding within the Perusall app as discussed above.)

National Research Council. (2015). Excerpt from Chapter 5: Assessing and Adapting. *Reaching Students: What Research Says About Effective Instruction in Undergraduate Science and Engineering*. Washington, DC: The National Academies Press.

<https://doi.org/10.17226/18687>

## Discussion Prompts

- In what ways is formative feedback necessary in an learning-focused classroom? What are some of the constraints of including formative feedback in a class?
- What is the role of *design* - connecting learning goals, evidence, and strategies?
- In what ways do writing assignments elicit student learning in a STEM course? What are some of the typical constraints to assigning more writing in these courses?

**Points** 100

**Submitting** Nothing

| Due                 | For      | Available from | Until |
|---------------------|----------|----------------|-------|
| May 26, 2021 at 6pm | Everyone | -              | -     |

+ [Rubric](#)

learning and adjust how they study.

*Summative* assessments, which evaluate students' performance against a standard or benchmark at the end of a unit, in midterm, or at the end of a semester, continue to have a place in research-based instruction. They can tell you how students have progressed in their learning and can be used to determine students' grades. In addition, summative assessments can help you evaluate the effectiveness of your course design and determine which aspects to adjust in future iterations of the course.

### ***Roles of assessment in a research-based course***

Effective formative assessments conducted during the course of classroom instruction can make students' thinking "visible" to the instructor and the students themselves, notes the National Research Council (NRC) report *Knowing What Students Know: The Science and Design of Educational Assessment* (National Research Council, 2001, p. 4). They can reveal students' preconceptions and help both instructors and students monitor students' progress from a naïve to a more expert-like understanding. In a research-based classroom, formative assessments are not quizzes that students can ace by memorizing material the night before; rather, they should provide students with opportunities to revise and improve their thinking and help teachers identify problems with learning (National Research Council, 2001).

Rick Moog, a chemistry professor at Franklin & Marshall College, came to understand the various roles of assessment in the 1990s, when he began developing the group learning activities that would later evolve into Process Oriented

This concept reiterates what was mention in previous nodules. That students be to become capable of critical thinking and problem solving in their field. These skills are not achieved by simple memorization. I feel the importance of staying away from simple recall as a method of student evaluation can not be understated. +1 ✓

May 25 4:05 pm

Absolutely! So many of my courses gave assessments that required strict memorization.. Professors acted as though that was the best way to gauge our understanding. Students would be upset when they wouldn't do well and would think they didn't understand the material when sometimes the students simply didn't memorize material well! Golly how we get stuck on that first tier of Bloom's. ✓

May 26 2:00 pm

B I A [link icon] [math icon] [emoji icon] [share icon] [lock icon]



Enter your comment or question and press Enter. Mention a friend by typing @. Add hashtags by typing #.

Because different types of assessment have various strengths and weaknesses, researchers suggest using multiple forms of assessment, rather than relying on a single form, to obtain the richest information about students' learning (National Research Council, 2001). For example, if you are using a validated multiple-choice instrument to measure conceptual knowledge, you might supplement that with an assessment that requires students to write about and reflect on their learning to probe other aspects of their understanding and to encourage metacognition.

Steven Pollock and his colleagues in the physics education research group at the University of Colorado Boulder have employed different assessment methods at different stages of transforming several upper-division physics courses (Pollock et al., 2011). In the course design stage, they use student observations and surveys, analyses of student work, and interviews with previous instructors of the courses to investigate common student difficulties and determine what to teach. For formative classroom assessments, they use clicker questions and tutorials to pinpoint and address student difficulties. At the end of the course, they use a standard validated post-test and faculty interviews to assess student learning and evaluate the impact of the changes.

The sections that follow describe some of the most common assessment methods used in research-based courses.

### **Assessments of conceptual understanding**

Improving students' conceptual understanding is a primary goal of research-based practice. Several research-validated tools have been developed to assess students'

This screenshot shows a conversation on a social media platform. At the top, there is a header for a "Current conversation" with navigation icons. The main text of the conversation is a tweet from a user with a profile picture of a hand, mentioning a video by Dr. Aubrie Pirman and @Bridget Trogden. The tweet discusses criteria for assessment and compares US and Ghanaian educational standards. Below the tweet, there are two replies. The first reply, from a user with a profile picture of a hand, expresses interest and shares a personal anecdote about a math lesson on decimal subtraction. The second reply, from @Bridget Trogden, responds to the first reply, noting that the perspective is strange to her as she has learned about US K-16 education. At the bottom, there is a text input field with a profile picture of a hand, a "Enter" button, and a "Mention" button. The input field contains the text "Enter your comment or question and press Enter. Mention a friend by typing @. Add hashtags by typing #."

Current conversation

This reminds me about the video of Dr. Aubrie Pirman, in the learning-focused assignments: part three - criteria/assessment. And @Bridget Trogden , you hit the nail right on its head in your scribe under part 3: criteria/assessment when you stated that "this section challenges you to reflect on the degree to which assignments clearly communicate how student work will be evaluated" Assessment is an instrument used to measure the success of teaching and learning in the classroom. @Bridget Trogden do we have a percentage benchmark (pass mark) on assessment that makes the delivery of a lesson successful in the US? For instance, in Ghana, when the percentage of students passing an assessment in a lesson is below 50%, the lesson is considered to be unsuccessful and the lesson needs to be taught again by the teacher.

May 25 7:21 pm

That is such an interesting perspective, +2 ✓  
! To my knowledge, undergraduate education in the U.S. does not work that way. If students are failing a concept, we don't usually go back to that concept. I originally noticed this when my son was in 3rd or 4th grade. There might be a math lesson that he just completely didn't get - like subtraction of decimals by hand. Rather than going back and helping him learn it, the teachers would just keep going with the content and the excuse was that it wouldn't impact his grade. Honestly, I do not care what my 7 year old's grades are. I want him to learn.

I've also heard the argument that U.S. education (K-16) is all about the content coverage and not about the actual understanding. Our textbooks are 3 times thicker than they are in other countries. We worry so much about content and it's just too much and too fast.

May 26 10:39 pm

@Bridget Trogden this is strange to me - I've learnt something new today about US K-16 education.

May 26 11:29 pm

Enter your comment or question and press Enter. Mention a friend by typing @. Add hashtags by typing #.