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9-19-2017

Session 9: Learning and Critical Thinking Part 1

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Recommended Citation

Olson, MaryEllen and Pyne, Robert, "Session 9: Learning and Critical Thinking Part 1" (2017). *Gateway's Pilot Year*. 7.
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Session 9: Learning & Critical Thinking 1

Possible Additions/Changes

1. [5 Steps to Evaluate Fake News](#)

To Print/Prepare Before This Class Session

1. [Gateway Scenarios Document](#)
1. [Evaluating Deductive Arguments](#) (one page exercise, one copy per student)
2. [Handout for Lesson 9](#) (share in your Google Classroom, print at your discretion)
3. [Video](#) (share in your Google classroom)
4. Prop examples of various news sources (newspapers, magazines, digital media, etc.)

Top 3 Content Areas (*try to get to everything, but in case you can't*):

1. Discuss scenarios (video shared to be shared in Google Classroom)
2. Critical thinking: discussion of how we read the news
3. Critical thinking: introduction of material on assessing arguments

Person responsible for developing this session: MaryEllen Olson/Robert Pyne

1. **Session Title:** Learning and Critical Thinking 1
2. **Session Date:** Tuesday, September 19, 2017
3. **Plenary or Small Group?** Small Group
4. **Learning Outcomes**
 - a. Utilize academic resources effectively and with integrity.
 - b. At the conclusion of this lesson, students will be more self-aware of the way they approach media for news and information.
 - c. At the conclusion of this lesson, students will be better prepared to assess the strength of arguments.
5. **Other Goals**, if applicable (these are goals not directly connected to student learning – e.g. forming group cohesion or identifying which students may be struggling to transition.)
 - a. It's OK to ask for help and it's OK to need help, and there are many resources on campus to support your success
 - b. You will likely learn more about your students and the way they approach the world while interacting about news source.
6. **Brief Narrative** describing the session (3 – 5 sentences offering the leaders a general sense of what will take place on this date.)

Students and leaders will discuss what assistance might be needed and where to obtain that assistance via imagined scenarios. They will then discuss the topic of critical thinking..

7. Lesson Outline

- a. Transition and check-in (5 minutes) FUN ICEBREAKER
- b. Reiterate that sometimes we all need some assistance, and this is a good time in the semester to make sure we know where to find help.
- c. Read and discuss scenarios. Talk about what assistance might be needed and where to obtain that assistance. (7-10 minutes).
- d. Critical Thinking—This will take up the remainder of the lesson. Part One could occasion good discussions with the students, so let those play out a bit. Parts Two and Three involve quick exercises, but each will need at least a couple minutes of explanation. The material in Part One is not covered in any of the handouts, but Parts Two and Three are covered in some detail in the handout to be shared with students via Google Classroom.

Part One: Reading the News

Suggested comments in italics (feel free to personalize!):

On August 11, 2017, this was the banner headline on page one of the Green Bay Press Gazette: 'Favre says Packers have the pieces to win the Super Bowl.' I don't want to get off on a tangent about football; I want to ask some questions about the way we approach the news.

- *Would you see that headline anywhere else but Green Bay?*
- *Would anyone but a Packer fan care about what Brett Favre has to say about the Packers in August?*
- *Why would it be front page news here?*
- *What does our interest in this story have to say about our relative interest in other news stories? (E.g., escalation of tension and threats of nuclear war with North Korea)*

We tend to approach sports news as fans. The Press-Gazette put this story on page 1 because they think people in Green Bay will want to read it, and they are probably right. We all want to read what is for us hopeful and encouraging news, from people we like, that reinforces what we believe. It makes us feel good about ourselves! On the other hand, I personally don't care what they are saying about the Buccaneers in Tampa, and I don't care what they are saying about the Packers in Chicago. You might be drawn to those stories. I'm not. In fact, I would probably be annoyed by a Chicago story about Green Bay. I would probably

avoid that story, just as I would avoid a negative review of my favorite book, or a cranky critique of my favorite restaurant. On the other hand, if I were to come across a rave review of my favorite restaurant, I might want to read it; after all, it affirms my choices and reminds me of my good taste.

[Teaching note: Whether you stay with the specific analogies listed above or substitute your own, the questions below get to the heart of this section. Present and interact with them however works best for your group of students.]

For discussion:

- Do we approach other news stories the same way, reading as fans? Do we tend to read mostly news that reinforces our ideas (certainly true if we get most of our news from Facebook), or do we intentionally try to read from multiple perspectives?
- Do we approach classes that same way? Conversations with friends?
- Is it disorienting for you to read stories that are critical of your viewpoints, especially if they are logical, well-grounded, and maybe written by someone you respect?
- What about in the classroom? How do you react when a professor clearly disagrees with something you believe?
- If you wanted to read the news more critically, with more attention to multiple viewpoints, how would you do that? What sources might you consider?

Part Two: Assessing Deductive Arguments

Introduction: *Deductive arguments are either valid or not valid. If the premises are true, and the form of the argument is correct, the conclusion must be true.*

Leader instructions:

Distribute one page exercise: “Evaluating Deductive Arguments” (in folder for this lesson). Give them about two minutes to complete it, and then discuss. Note: All these examples are explained in the longer handout, included in this folder, which should be shared with the students via Google Classroom (and, if you wish, distributed by hard copy). Below is the text from the exercise.

Which of the following arguments are valid? Circle all the ones you believe to be valid, and put an X through any that are not.

(Note: for the purposes of this exercise, the premises [the a. and b. statements] are assumed to be true in each case.)

1. All ducks are birds.
2. Donald is a duck.
3. Therefore, Donald is a bird. (VALID)

1. No ducks are mammals.
 2. Donald is a duck.
 3. Therefore, Donald is not a mammal. (VALID)
-
1. Some ducks are white.
 2. Donald is a duck.
 3. Therefore, Donald is white. (NOT VALID—Donald may or may not be white.)
-
1. Either we are inside or we are outside.
 2. We are not inside.
 3. Therefore, we are outside. (VALID)
-
1. If it is raining, the street will be wet.
 2. The street is wet.
 3. Therefore, it must be raining. (NOT VALID—Something else may have caused the street to be wet)
-
1. If it is raining, the street will be wet.
 2. It is raining.
 3. Therefore, the street will be wet. (VALID)
-
1. If it is raining, the street will be wet.
 2. It is not raining.
 3. Therefore, the street is not wet. (NOT VALID—Something else may have caused the street to be wet)

Part Three: Evaluating Inductive Arguments

Introduction: *Inductive arguments are capable of varying degrees of certainty. That is, these sorts of arguments are either strong or weak.*

[NOTE to instructors—Discussing the difference between inductive and deductive arguments sets up an important and simple point: most of the arguments we hear and use are not true or false, but somewhere on a spectrum between strong and weak. The examples below do not have obvious answers like the ones above. Some are very weak, but even those are not simply false.]

Leader Instructions:

Several examples of inductive arguments are stated below. Read each of these statements and have students rate, and call out, their strength on a scale of 1 (weak) to strong (10). Ask for an explanation after each example, and help the group come to some agreement. This exercise should move pretty quickly, with no more than 30 seconds to one minute of discussion after each example. Feel free to add your own examples, but please note that these four examples correlate with the types of inductive argument addressed in the critical thinking handout (shared in this folder, and to be shared with the students via Google Classroom). Here are the example arguments:

- i. "The incoming class at St. Norbert College is the smartest we have ever had. The top 10% of incoming students have the highest ACT scores of

any incoming class."

An argument from statistics is only as good as its statistics and their relevance to the point. In this case, the statistic might be reliable, but it does not necessarily support the argument that these are the smartest students we have ever had.

- ii. I just bought the fastest laptop ever made. According to the salesperson at the Apple Store, "This new MacBook Pro is the fastest laptop ever sold in the United States."

An argument from authority is only as credible as the authority. In this case, a salesperson should not be seen as wholly credible, and, even if they are, "ever sold in the US" ≠ "ever made."

- iii. "Sharks and dolphins both have rubbery skin and swim in the water, and they both have dorsal fins. Sharks have gill slits, therefore dolphins probably do, too."

An argument from analogy might make perfect sense, but the analogy might lead us astray. In this case, dolphins are mammals; they do not have gill slits.

- iv. "Housing prices in Green Bay declined until 2011, but they have increased every year since. The Packers won the Super Bowl in 2011. Therefore, the Super Bowl victory must have made more people want to buy houses in Green Bay."

The fact that two things happened at the same time does not necessarily mean that one caused the other.

8. Background Information

- a. Handout (to be shared in Google Classroom)