

# Practical Suggestions to Improve Online Discussions Across Disciplines

**Dr. Darryl Chamberlain** (Slides 2-9)

**Dr. Zackery Reed** (Slides 10-19)

**Dr. Alex Rister** (Slides 20-30)

**Dr. Meghan Velez** (Slides 31-36)

WORLDWIDE CAMPUS | COLLEGE OF ARTS & SCIENCES

# Examples of Discussion Activities that Encourage Synthesis of Knowledge

Dr. Darryl Chamberlain Jr.  
Assistant Professor

Department of Mathematics, Science, and Technology

**EMBRY-RIDDLE**  
Aeronautical University

# Synthesis by Creating Study Guides

This course provides you with a plethora of educational resources, including textbook readings, lecture videos, worked-out examples, and summaries of module content. Students usually engage with the content as a means to answer the homework and quiz questions and not as a way of organizing their thoughts about math concepts.

For this group discussion, you will organize your thoughts about all of the concepts from either Module 1, 2, or 3 into an easy-to-read study guide. Your instructor has assigned you to a group of 5-6 people. Each group member will create their own study guide to share with the group.

An effective study guide will contain all of the following:

- Organized by concepts or module objectives.
- Summaries of each concept/module objective *in your own words*.
- General descriptions of the process of solving equations (rather than specific examples that may or may not be on the exam).

Students usually do not reflect on specific homework questions to write these general descriptions. For example, take the process of creating a linear function from two points. The *general process* is:

- Find the slope using the formula  $m = \frac{y_2 - y_1}{x_2 - x_1}$
- Use 1 point and the slope to solve for  $b$  using the equation  $y_1 = mx_1 + b$
- Plugin the values you found for  $m$  and  $b$  to get the linear equation  $y = mx + b$

If we are trying to remember the general steps in a short form, we could take it one step further and write:

- Find the slope using the slope formula.
- Use 1 point and the slope to solve for  $b$ .
- Plug  $m$  and  $b$  into slope-intercept form.



## Module 1 Study Guide

### **Define a Function:**

- A function can be described as a relationship where the value of one item relies solely on the value of another item
- The first value will always have one second value
- A function contains an independent and dependent variable

### **Identify the domain and range of a function:**

- Domain is the set of numbers that the independent variable could be in a function
- Range is the set of all numbers that the dependent variable could be in a function
- Reminder that only real numbers are used in functions so some other numbers may not be included in the domain and range because of that
  - Such as dividing by zero

### **Graph Linear functions using points:**

- First, create a table of x and y where x has multiple values
- Second, use those values of x to find the corresponding y values
- Third, use those values to plot points on the graph area
- Fourth, use a line to connect the points to complete the graph
- Be careful when dealing with negative numbers
- Avoid using values of x that will lead to imaginary numbers

# Synthesis by Designing Video Lessons

One effective method to develop a deeper comprehension of a subject or concept is to explain or teach that topic to someone else.

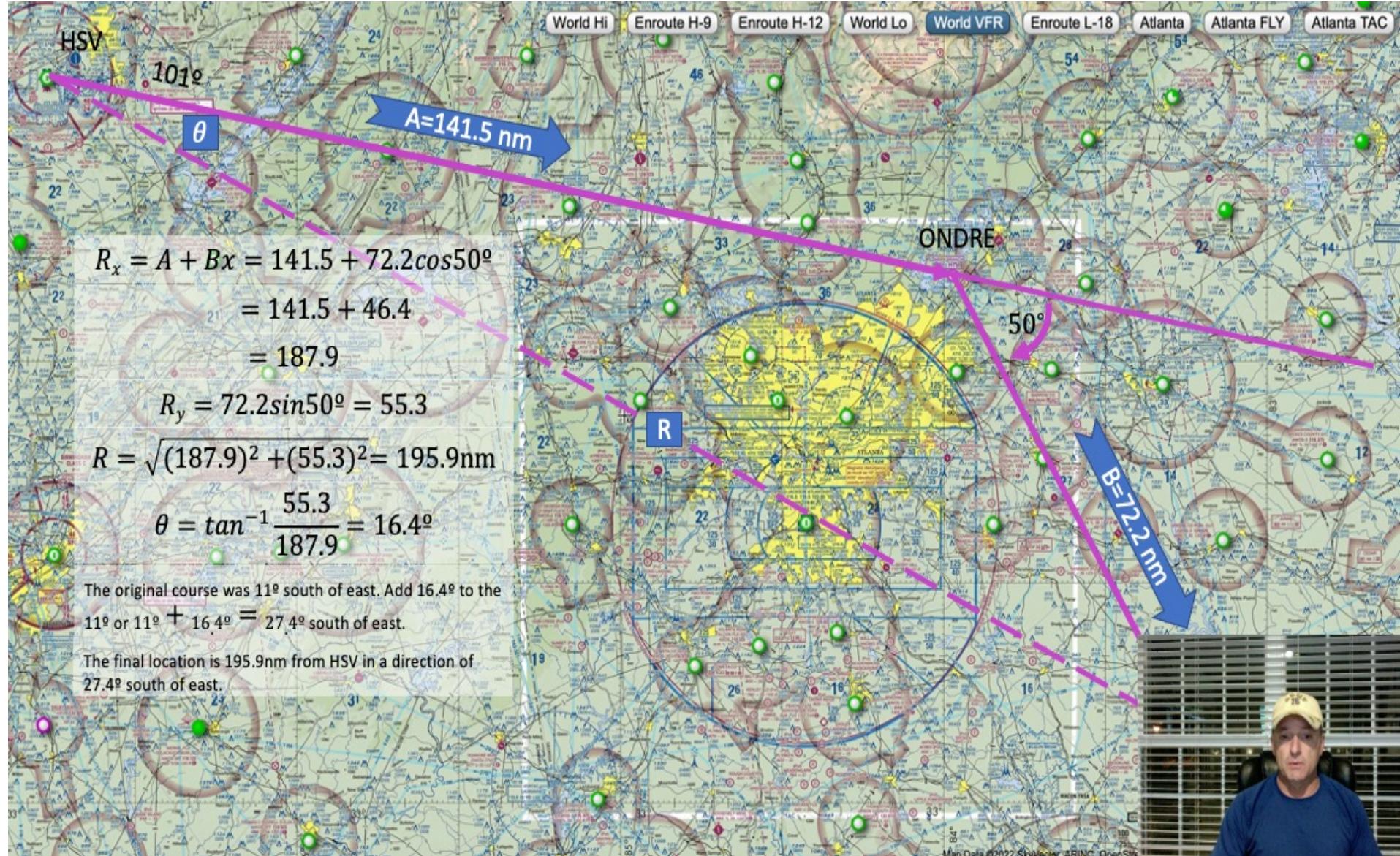
For this group discussion, you will develop a short (5 minutes or less) video that covers a concept from Module 5 or 6. A high-quality video will contain all of the following:

- Introduction of a concept or module objective.
- Summary of the concept/objective *in your own words*.
- An example to illustrate the concept/objective.

If you are presenting a module objective that has many technical steps, it may be better to take the "cooking show" approach of stating what needs to happen, then having the messy calculations already done so you can move to the next step quickly. It is important to keep the video short!



Student created a real-life scenario (flying from point A to point B and navigating around a no-fly zone) based on a mathematical topic, gave a brief summary on how to approach the problem, AND presented the finished work with interpretation of the mathematics.



# Synthesis by Designing Algorithms

## Group Activity 2.1

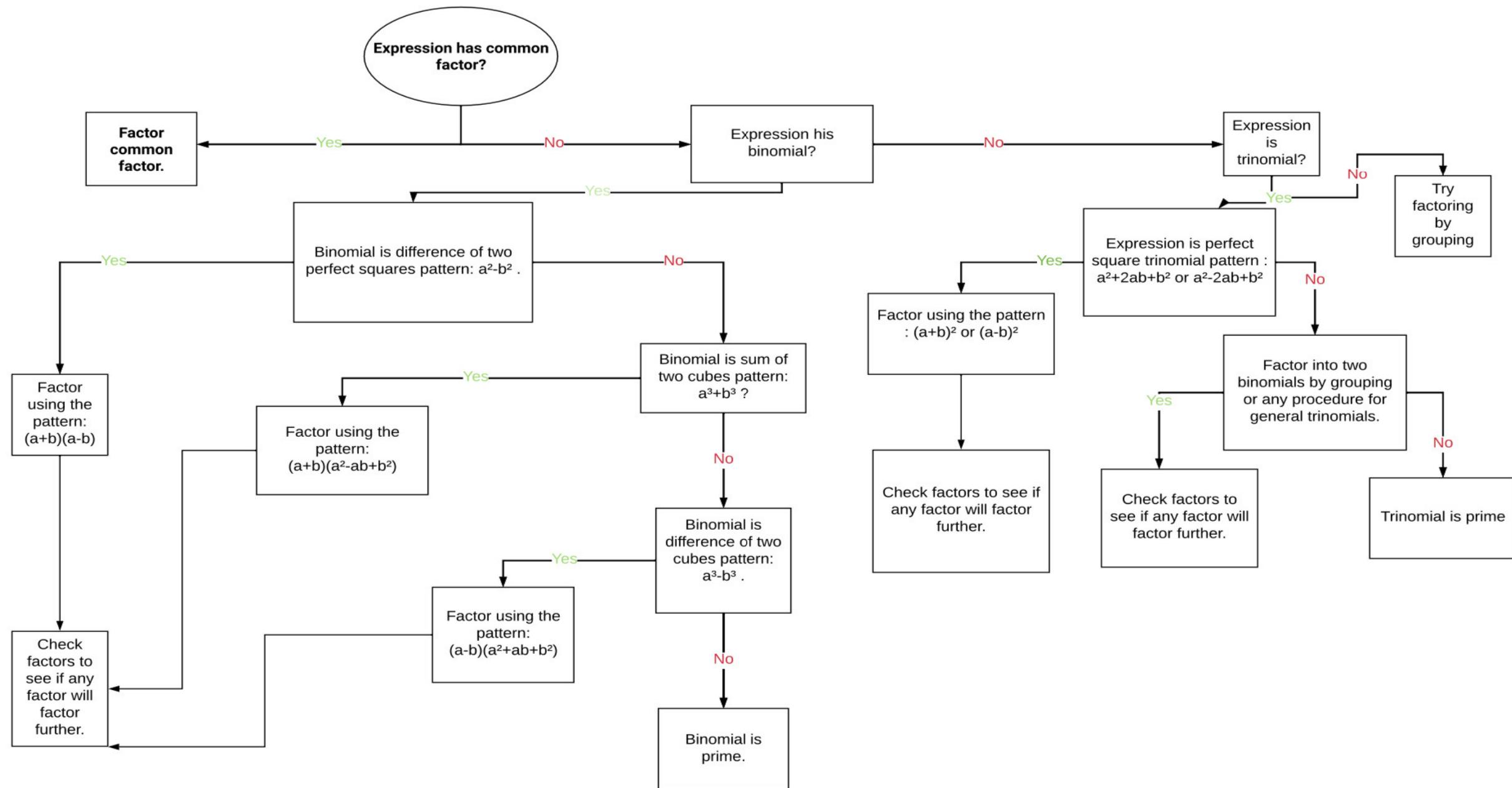
In this activity, you will attempt to write general steps to solving any right triangle problem using the trig identities given to you. *You may find it helpful working two specific examples, then trying to generalize the steps you made to work with either. If your group is stuck, click the "Notify My Instructor" button on Zoom.*

- **Group 1:** Only Sine
- **Group 2:** Only Cosine
- **Group 3:** Only Tangent
- **Group 4:** Only Sine/Tangent
- **Group 5:** Only Cosine/Tangent
- **Group 6:** Any trig functions

1. Design the triangle
2. Give one angle and one value
3. find any necessary info for the sin
4. find all the values
5. use  $x^2 + y^2 = c^2$  or  $\sin(\theta) = \frac{\text{opp}}{\text{hyp}}$

Step 1	Identify your given angles & side length
Step 2	Solve for remaining given angle
Step 3	Identify what function works best with your given information
Step 4	Solve for given side length
Step 5	re-identify another usable function (preferably using given information)
Step 6	use second equation to solve for final side

- Groups successfully went from two specific examples to a list of general steps to solve for the missing angles/sides of a right triangle.
- Students who were restricted to one trig function also noticed they could use the Pythagorean Theorem.
- Students were convinced that there was no “correct” way to solve for the missing sides of a right triangle and could use whatever method they preferred.



# Task Design: Promoting Interaction and Problem Solving

Dr. Zackery Reed



# Typical Discussion Format

- Ask closed form questions solvable by an individual.
- Q: How many ways are there to arrange the letters in the word BANANA?
- Individuals post solutions: “60 ways because ....”
- Peers comment on correctness, formatting, agreement, etc.
- Instructors comment on correctness, formatting, agreement, etc.



# Design Goals for Discussions in Calculus

- Require Reflection on Core Concepts
  - Tasks target major course themes
- Elicit Communication and Collaboration
  - Gen Ed Competencies
- Support Deep Thinking and Problem Solving
  - Gen Ed Competencies



# Example Task: Torty and Harry

Torty and Harry are competing in a 100m footrace. Torty's average speed on ***any possible*** 5-second interval is always less than Harry's average speed on any 5-second interval, but Torty wins the race!

(No head starts, no backward motion, no stopping)

Poll: Is this possible?



# Example Task: Torty and Harry

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# Features

Easy to state and intuitively understand.

Creating and justifying a viable solution requires deep thinking, attention to content, and problem-solving skills.

[Example of an Incorrect Solution](#)



# Features

Requires verification: Details require collaboration and feedback

Pseudo Open-Form: Many solutions exist, and establishing solutions can still require collaboration

[Student Solution 1](#)

[Student Solution 2](#)



# Poll

Did/does it go well?

Depends! (Mostly yes!)

It requires buy-in from instructor and student.

Requires a re-conceptualization of the instructor's role, of the nature of student interaction, and of the expectations for a final product.



# Relevant Forms of Instructor Engagement

Establish a classroom norm of collaboration

Establish a classroom norm of solving with the class and in the discussion board.

Give hints that help move students forward without giving away answer.



# Further Discussion

A blurred background image of a person's hands working at a desk. A smartphone lies on the desk, and a keyboard is partially visible. The scene is softly lit with warm tones.

# RETHINK

DISCUSSIONS

DR. ALEX RISTER

# RETHINK

D I S C U S S I O N S



**Mock Press Conference**

Initial video post



**Question from the Press**

First response post



**Response to Press Question**

Second response post

# RETHINK

D I S C U S S I O N S



**HOW DID IT GO?**

## HOW DID IT GO?

"I found module 4 to be very exciting and fun! I loved the way my fellow students presented. It also helped me relax and be able to have a more natural delivery. Real life applications is the best way for me to learn."

- COMD 460 Student

Please read through all sections before proceeding to the next page, and refer back whenever necessary.

Instructions

Response Posts

Based on the Crisis Scenario assigned to you in [Module 4 - The Crisis Simulation](#), you will assume the worst has happened since the crisis has struck the organization.

One way organizations respond to the avalanche of media requests they receive when faced with a crisis is through a **press conference**. This mock press conference will give you experience in planning for and presenting in this communication format. It will also give you experience in asking questions and answering questions from an occasionally hostile press.



Your press conference video should include the following components:

- Clearly state the reason for holding the press conference: What is the crisis? How is the organization responding?
- Concentrate on effectively delivering 2-3 primary points or take-aways to the audience.
- Keep the speech content short, simple, and clear. Your video should be 4-5 minutes.

In order for the remaining days of the module week to mimic a back-and-forth press conference scenario, you will post your press conference video by the fourth day of the module week.

You will complete this activity in the following three steps:

1. Post the press conference video by the fourth day of the module week.
2. As a member of the “press,” post a question for one classmate by the fifth day of the module week.
3. Return to the discussion forum so you can answer at least one question from the “press” by the last day of the module week.

# RETHINK

## DISCUSSIONS

4

### Mock Press Conference

[Video Discussion](#)

Please read through all sections before proceeding to the next page, and refer back whenever necessary.

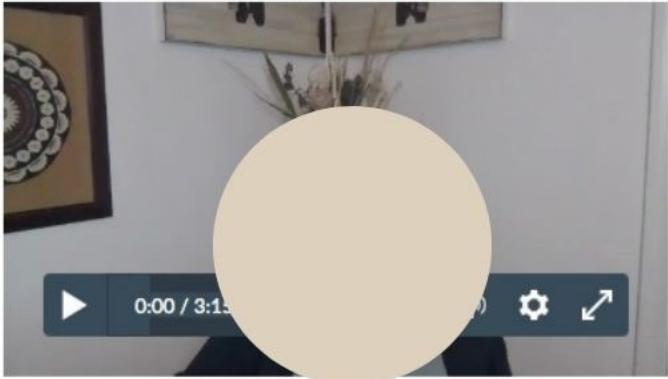
Instructions

Response Posts

Return to the discussion forum later in the module week to complete the following two posts:

- **Question:** For your response post to your classmates this module week, you are pretending to be a hypothetical member of the media. Ask a few tough questions to one fellow classmate. **Due by the fifth day of this module week.**
- **Answer:** You must respond to at least 1 question asked of you as a part of your press conference discussion forum assignment. **Due by the last day of the module week.**

Be sure to review the discussion rubric to do your best work on your response posts!



Reply



Nov 10, 2022

⋮

Is there a method for members to check if their account has been compromised or are they being made to wait to ensure the bank finds those mistakes? How can we trust that the organization that missed this event in the first place will be trustworthy enough to see this through?

Reply



Nov 10, 2022

⋮

I realize we have put ourselves in the position of losing the trust of our customers and I apologize for that. We are going through all accounts and reaching out to those who have accounts that are in question. We ask that any customer with a concern contact us at [www.bankwithys.com/accounts](http://www.bankwithys.com/accounts) or call 800-555-1212 and we will check your accounts for fraudulent activity. We have hired a third party auditing team to come in and do a financial investigation of all our branches and accounts.

Bank With Us

P.S. Why didn't I think of the auditing team in my original post! geez

# RETHINK

## DISCUSSIONS

### Mock Press Conference

Initial video post

### Question from the Press

Response post #1

### Response to Press Question

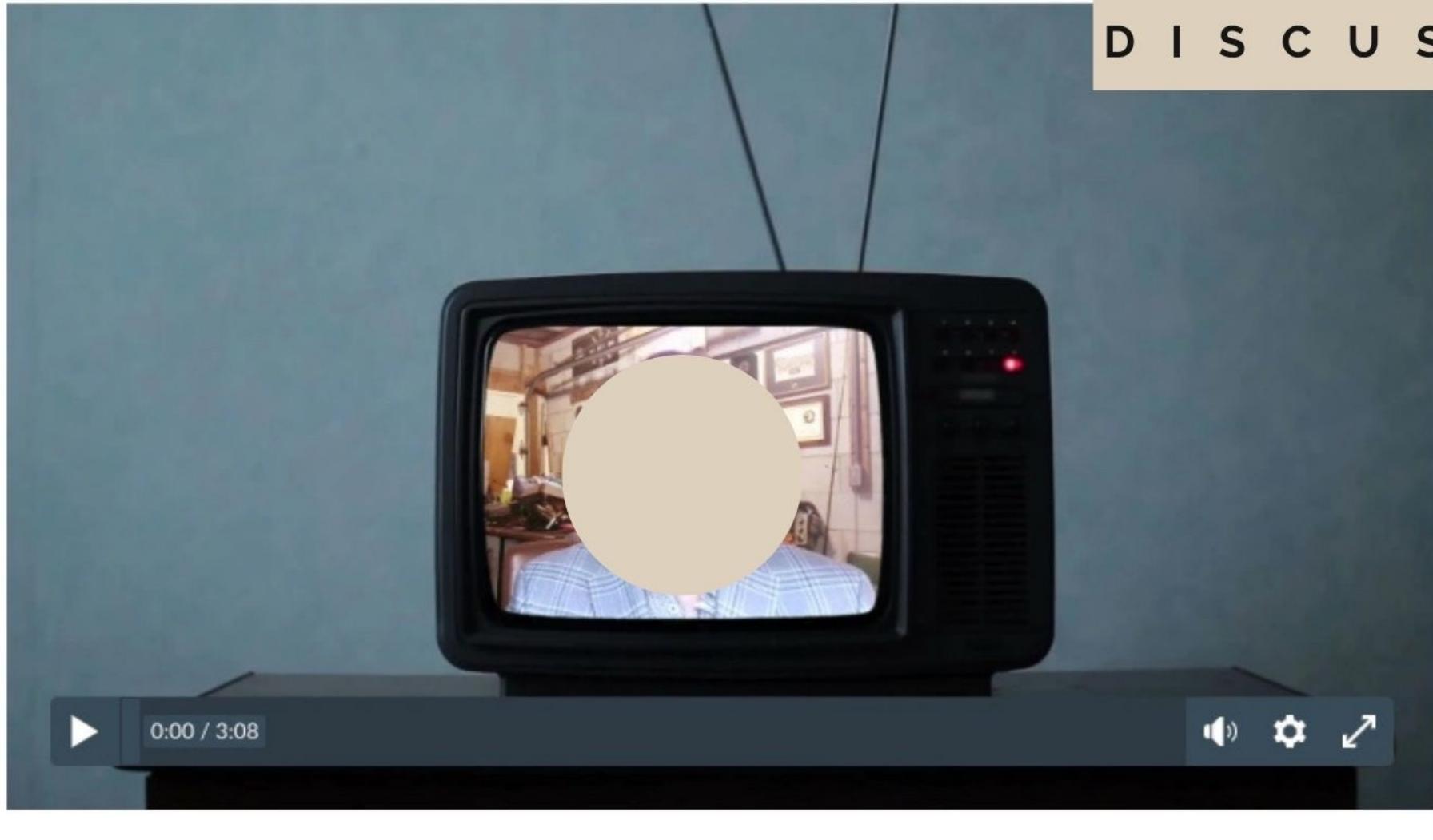
Response post #2



Nov 10, 2022

# RETHINK

DISCUSSIONS





Nov 10, 2022

The enterprise of Crossfit, while profitable, has carried a reputation for dangerous movements that readily cause bodily injury to participants - featuring maneuvers like the dolphin pullup and the inverted kettlebell handstand grand prix 5000- how is this a beneficial change for the legacy company when it appears to be more of a quick cash grab?

## Question from the Press

Response post #1

[Hahahaha you put yourself in a T.V. Hahahahaha. Bravo]



Nov 10, 2022

Thanks. I've always wanted to be on TV. I just had to do it myself.

Sierra takes all of the dangers inherent in Crossfit very seriously. Sierra will only be retaining the most certified and experienced trainers from Romeo who believe in talking about dolphin pullups and inverted kettlebell handstand grand prixs (no matter what number) more than actually performing them.

Rule number three of Crossfit is to make sure everyone knows how great it is, so that's what I'm here to do.

Anymore brain-busters for me?



Nov 10, 2022

Will Sierra be approaching the Crossfit style holistically to include vegan organic gluten-free paleo wheatgrass bars in their installation? This has been another point of contention and frankly polarizing between members of CrossFit and traditional Globo gym structures.

Follow on, how do you intend to keep from alienating your former members who truly embraced that every day was leg day?



Nov 11, 2022

Thank you for those great questions.

Sierra will not be offering food choices at our gym facilities. We have found that when a gym gets into that realm, people stand around and talk about their food preferences and diets too much and do not work out.

We are truly grateful for our many loyal leg day studs. But we feel one of the severe errors we made previously was in not pushing them to work out other parts of their bodies besides their legs. We want the best for all of our members, and we believe the best is cross-fit based on everyone who talks about it. Skinny legs will have to become acceptable.

## Response to Press Question

Response post #2

# RETHINK

## DISCUSSIONS

### Lessons Learned

1. Challenge the standard 1 initial post, 2 response posts format
2. Consider creative, mock scenarios where the discussion might take place (like a press conference)
3. Vary the types of posts, such as incorporating both video and text-based posts
4. Vary the expectations of response posts



A blurred background image shows a person's hands working on a laptop keyboard. To the right, there is a white coffee cup and saucer. A large, semi-transparent yellow rectangular box covers the center of the image, containing the text.

# QUESTIONS?

**DR. ALEX RISTER**  
**RISTERA@ERAU.EDU**



Discussing complex readings  
through  
**SOCIAL ANNOTATION**

Dr. Meghan Velez





## Social annotation tool: **PERUSALL**

Students accessed all course readings through  
Perusall

Canvas discussions replaced with annotation  
activities

Quote, Question, Comment  
format



How did it go?

# 01

to create effective speeches or other forms of communication. Instead, some rhetorical theorists are more interested in how rhetoric creates our world, our experiences within that world, and our conception of ourselves. Many theorists we'll encounter, particularly those of the twentieth and twenty-first centuries, are primarily interested in the kinds of worlds we construct through rhetoric. Less interested in creating effective rhetoric, instead they are concerned with critiquing how rhetoric affects our relationships with others, our views of truth, and our value systems. Lucaites and Condit (1999b) noted that rhetoric should be seen as a "substantial dimension of many facets of the human social experience" (p. 10).

To expand the concept of rhetoric as method even further, we can study what happens when rhetorical theory critiques itself. We have previously discussed the relationship between rhetorical theory, criticism, and practice. Underscoring this relationship is the idea that theory constantly revises itself. Rhetoric in this sense is self-reflexive. The questions rhetoric asks of other subjects, can also be asked of itself. We use rhetoric to question whether a particular type of proof may be the most effective for a given situation, for instance. In essence, we constantly revise rhetorical theory in light of how rhetoric is used within a culture.

## LIMITS OF RHETORIC

Although rhetorical theorists generally agree on the ideas in our previous discussion, there is a great deal of disagreement when it comes to determining the limits of rhetoric. We'll discuss some of the points of controversy here. For each issue, you might think of a continuum, a line with two divergent ideas upon which there are many intermediary points. Some theorists hold extreme views on these issues, but other theorists fit somewhere in the middle of the continuum. To facilitate your introduction to rhetorical theory, we'll take a fairly inclusive approach to rhetoric in this book, choosing to discuss the following points of controversy regarding rhetoric's limit:

This caught my attention in a way that is slightly concerning unless I am misinterpreting the intent of the message. What I mean by that is in recent times, it appears that it is more important to preserve relationships than to communicate effectively or communicate truths that may be hurtful or destructive to other people. I am the last person to be hateful or rude but sometimes I believe that truths and facts need to be said regardless of the audience, that is the basis of growth and knowledge. Another way this could be interpreted is, the effect rhetoric has on an audience and less on what is being said. Because how can rhetoric be effective if nobody in the audience is persuaded or even comprehends the message?

I think that what is meant here is that presentation is equally, or in some cases even more, important than the content of the message being delivered. If you've ever had to give a pet medicine, then you've probably experienced this already. A pet may not understand the "what?" or "why?" of the medicine they're being given but if it's packaged in peanut butter or cold cuts, they're less inclined to pull away and in so doing are much more likely to receive the benefits of the medicine, or message, in this rhetorical situation. My thoughts are that one could fill this entire course front to back with critiquing preexisting rhetoric and still not attain a complete grasp of the concepts because each audience and situation can be deeply subjective.

that's a great analogy! That certainly makes sense because you have to tailor your material to the audience. I can think of many times I have conducted a class or presentation to a younger audience in the military and made the material more interesting so they would pay attention. I think a person should tailor an argument to the majority to have the largest impact. Thanks for the input.

**Rhetoric and Public Address**

In a similar vein, some theorists contend that rhetoric is concerned with public address, and others use a rhetorical perspective to effectively study film, television, interpersonal communication, and other forms of communication. In its earliest conception, of course, public address was the form of rhetoric most widely used, studied, and taught. As orators began transmitting messages via radio, television, and the internet, the nature of the public address "event" changed. Today, it is almost impossible, and perhaps ineffective, to study the specific speaking event exclusively. Critics must also consider the medium's influence and the large audience exposed to the speech. Doing so, however, blurs the line between public address and other forms of communication. Although it's easy to see how the president's State of the Union Address is rhetoric, it is problematic to say that a photo-opportunity on an aircraft carrier is not. From there, it is not that much of a stretch to also claim that television, film, advertising, and content on the internet are rhetorical as well. In fact, much of our discussion in Chapters 5, 10, 11, and 12 will look at rhetoric that takes place in these different types of media.

**Rhetoric's Substance**

Finally, rhetorical theorists have, since the beginning of time, questioned the nature of rhetoric's substance. Some theorists contend that because rhetoric is interested in advancing arguments in support of truth, it is similar to philosophy. Others reject this idea and assert that rhetoric is simply the style and ornamentation attached to something we already know to be true or that rhetoric in fact hinders our search for truth because of its ornamental qualities. Most theorists today reject such totalizing statements, believing that rhetoric combines propositions with poetics, or arguments with style. For example, Barilli (1989) stated that, "Rhetoric is a comprehensive, total way of using discourse. This means that the physical aspects of speech are not sacrificed to the intellectual dimension" (p. vi). You'll see this controversy play out in Chapters 2–4. In the end, most theorists generally accept that rhetoric includes both style and content.

**INFLUENCES ON RHETORIC**

Rhetorical practice is constantly changing and as it does, rhetorical theory constantly changes as well. For example, a speech by Cicero to the Roman Senate in 55 B.C.E. was very different from a tweet sent by the president to a worldwide audience. Cicero, for instance, could see his entire audience and probably knew many of its members. President Trump, on the other hand, does not have physical contact with his audience, nor does he personally know a fraction of the total audience. The changing nature of rhetorical practice and rhetorical theory is due to several factors that we'll briefly discuss here. We'll talk about each of these factors in later chapters. Specifically, we'll examine two developments that have had significant impacts on rhetorical theory: culture and communication technologies.

Current conversation X

I'm not sure I fully understand this quote from Barilli (1989). I personally believe that the art of rhetoric encompasses the entire creation of a message; Invention, arrangement, style, memory, and delivery. But does this mean that the features and interpersonal connections a speech offers will not deter the intellectual mind from understanding the message?

Oct 18 3:10 am

I think what Barilli is saying, is that he believes that rhetoric is just +1 a way of speaking and it doesn't produce anything. What he's saying is that the content of the message and the way we convince people to see a certain side of an issue are different from rhetoric. He thinks rhetoric is only style, flare, and body language and it's separate from your actual message. I was a little confused about this as well until your question made me really think about it, thanks.

Oct 19 5:38 pm

I think what Barilli is saying is arguing what most of us have heard +1 at some point in our lives, that it's not what you say, but how you say it. When in fact, what you say is what you say, how it is presented doesn't change the meaning of what was said. Most things that are said



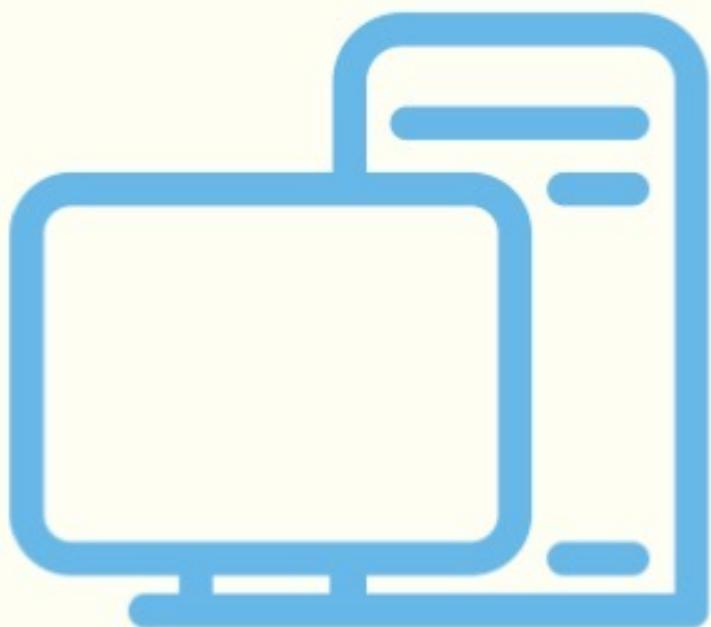
## builds confidence with **DIFFICULT CONCEPTS**

Instructors can easily identify gaps in understanding

Less pressure for students to "get it right"/regurgitate from the text

Models critical, engaged reading

# TRY IT!



Use Perusall or Google Docs to access readings

Create annotation activities

See where the discussion leads!

