

Using Challenge Questions to Stimulate Participation, Collaboration, and Discussion in the Classroom

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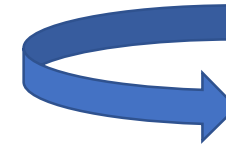
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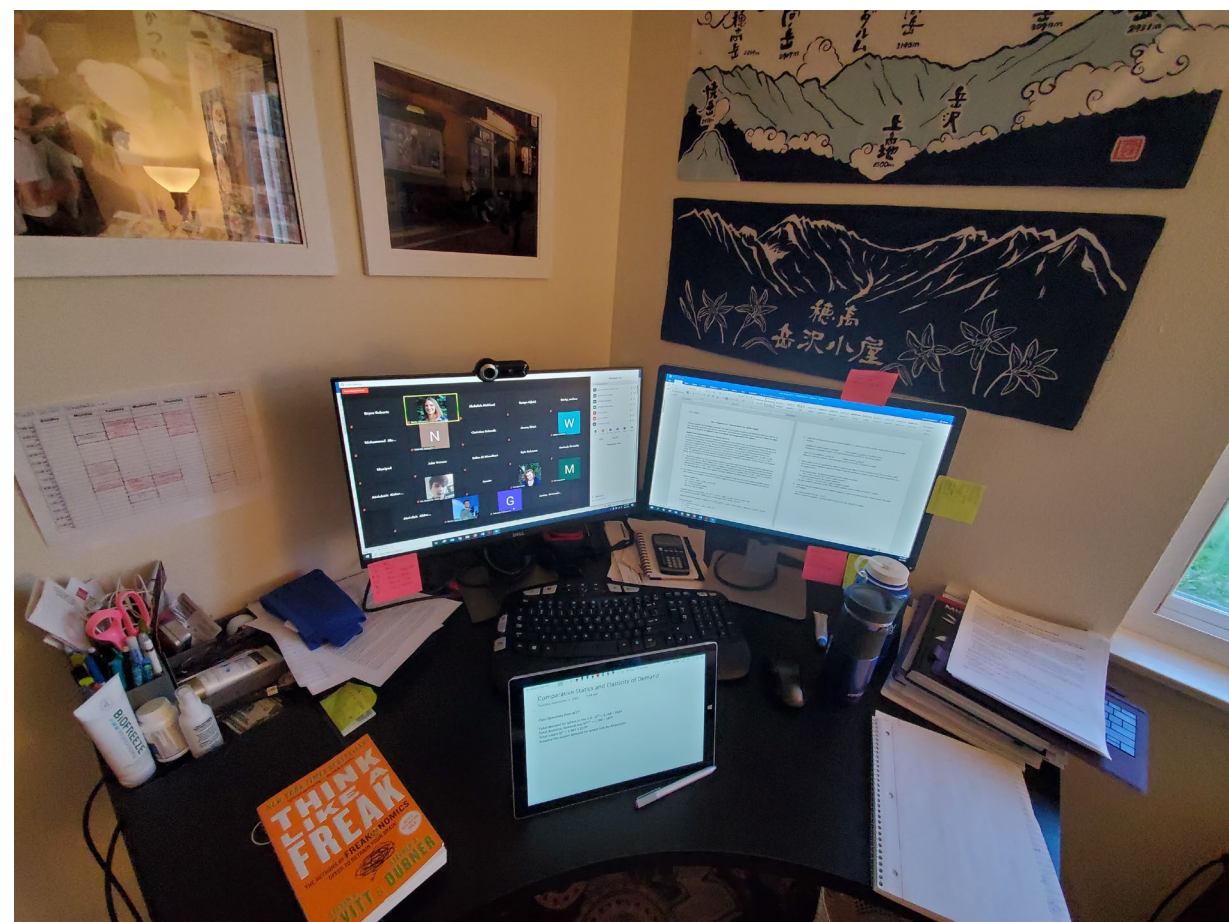


Overview

- Backstory
- Developing Challenge Questions
- Facilitating Challenge Questions
 - In-class
 - Synchronous Online
 - Asynchronous Online
- Integrating Challenge Questions into Your Course

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What is a “challenge question”?

- Open-ended problem
- Limited time to solve
- Extend upon basic knowledge
- Encourage students to be creative
- Drive students toward a consensus

Example of a Challenge Question (1)

The Challenge:

Gold Mine cupcakes is Golden's premier cupcake supplier. Currently, each regular sized cupcake at the Gold Mine sells for \$3.75. You've been working the cash register at Gold Mine for a couple of years, observing the clientele and their purchasing behavior. After learning about price discrimination in Microeconomics class, your eyes light up. There is an opportunity for Gold Mine to really become a gold mine if only the company would price discriminate. You take it upon yourself to come up with a proposal to your boss, the owner of Gold Mine, who is a skilled baker, but who has never heard of price discrimination. You would like to prepare her a proposal with three unique ideas for how Gold Mine could practice price discrimination in order to increase sales and elevate profits. You know from your experience, that the marginal cost of each cupcake is approximately \$1.00, regardless of the flavor.

Instructions:

Your team has five minutes to come up with three ideas for price discrimination. On the worksheet, list your ideas along with a brief explanation of why you think they would work and how come these techniques are price discrimination. Be prepared to share your responses with the class. Nominate one person in your group to present your ideas.

Facilitating Challenge Questions: In-class

Demonstration

Facilitating Challenge Questions: In-class

- Break the class into groups
- Distribute the question
 - Post online
 - Share on a slide
 - Provide on a handout
- Allow students time to work
 - Walk around the room observing what students are doing
 - Probe / encourage students
- Presentation time
- Collect group submission

Facilitating Challenge Questions: Synchronous Online

- Prepare a place for students to record their work and responses
 - Google Jamboard
 - Google Slides
- Distribute question
 - Post on class LMS so students have access to question when in breakout rooms
 - I make the questions appear when class starts
- Create breakout rooms (Zoom) and give students time to work
 - Breakout room number represents the group that students are in
 - Students record names on slides
 - Monitor Jamboard or Slides while students are working
 - Pop in to student breakout rooms to answer questions / probe students
 - Bring class back together pre-specified time
- Presentation time!

Facilitating Challenge Questions: Synchronous Online

Demonstration

Example of a Challenge Question (2)

The Challenge:

You meet a new friend on the street and you get to talking about chocolate and pretzels. This new friend shares with you his or her preferences for chocolate and pretzels. Since you are taking Intermediate Microeconomics, you decide that you want to sketch out your new friend's indifference curves for these items.

Instructions:

Go to the Google Sheet (Jamboard) and find your assigned group. Take a look at your new friend's statement about his or her preferences for chocolates and pretzels. Work with your team to develop a sketch of at least two indifference curves for this consumer. Make sure to indicate which indifference curve provides your consumer with more happiness. Chocolates will be on the vertical axis, and pretzels are on the horizontal axis. Be as specific as you can. Be prepared to explain why your group drew your friend's indifference curves in the manner you chose to! [Note: There is a "scribble" tool in Google Sheets that might be useful to draw your friend's indifference curves; there are also lines and curves... so whatever works!] You will have 10 minutes! I will check in with your groups.

Google Slides Link:

https://docs.google.com/presentation/d/18mCK9rVwtSOWIe6H_8E0gxh32FN9ibNATXtVVAMqzUA/edit?usp=sharing

Jamboard Link:

<https://jamboard.google.com/d/1B6EXvXF3HTsUE3YUxXzj6--bSoaBJe3fkGcD3FJy8KU/edit?usp=sharing>



Link to Google Slides



Link to Jamboard

Facilitating Challenge Questions: Asynchronous Online

- Provide a space for students to respond to the question on their own
 - On Canvas:
 - Split students into groups
 - Assign the challenge question as a group discussion where students must post their own answers before seeing other replies
- Students work within their group to develop a consensus answer
 - On Canvas:
 - Ask students to reply to their group members posts with feedback that confirms or challenges each group member's approach
 - Ask students to work together within the group discussion to develop a consensus answer to the question
 - Instructor checks in with groups and provides feedback (preferably before next step)
- Students submit their consensus response via group assignment
 - On Canvas:
 - Create a group assignment where students can post their responses. You may have them submit a video, slideshow, text, etc.
- Peers from other groups review the responses and provide feedback
 - On Canvas:
 - Set the assignment so that peer reviews are required and have students provide feedback on another group's submission
- Instructor Feedback to All

Class Implementation

- Attendance / participation
- Extra credit
- Other ideas?

Questions or comments??

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