Accommodating & Engaging Virtual Students in a Face-to-Face World!

October 28th, 2021

47th Annual AMATYC Conference

Marcia Corby & Dr. Krysten Pampel
Introduction to Marcia and Krysten
The Problem...

How do you offer a class that allows for students to choose an ‘in person’ setting but also allows them to choose a ‘live online’ setting?

AND

How do you keep them actively engaged???
## Two Sections... One Class?

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Invst Qty: Num, Ops, Num Sys (Lecture)</th>
<th>Section</th>
<th>Time</th>
<th>Location</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 256-0001 (19617)</td>
<td>Invst Qty: Num, Ops, Num Sys (Lecture)</td>
<td>7</td>
<td>MoWe 10:00AM - 11:50AM</td>
<td>B208</td>
<td>Jan 20, 2021-Mar 12, 2021</td>
<td></td>
</tr>
<tr>
<td>MAT 256-0003 (37565)</td>
<td>Invst Qty: Num, Ops, Num Sys (Lecture)</td>
<td>6</td>
<td>MoWe 10:00AM - 11:50AM</td>
<td>VIRTUAL MEETINGS</td>
<td>Jan 20, 2021-Mar 12, 2021</td>
<td></td>
</tr>
</tbody>
</table>
How did we **PREPARE** to teach HyFlex?

Logistics

Technology - LOTS of trial and error

Printouts

Classroom Setup

Setting Student Expectations
Video Call Software

Zoom!

Google Meets?

- VERY user friendly
- Easy breakout rooms already built
- No ability for breakout rooms (this has now changed somewhat)
- Different technology used
- Major login issues for many people
- Students didn't love it
- Students liked this one best.

Webex?

- Definitely worse than a nightmare. LOTS of delay in being able to hear people talk.
- No ability for breakout rooms
- Some logistical planning ahead of time (different google meet links)
- Delay in hearing people talk. Students often talking at the same time, which caused volumes to adjust and talk over each other.
- Students didn't love it.
- We didn't love it...

Webex?

- Major login issues for many people
- Students didn't love it.
- We didn't love it...
Our HyFlex Tech

Krysten:
- Zoom
- Dual Monitors
- Dual Projectors
- iPad
- Microphone for Teacher
- In Class Speakers

Marcia:
- Zoom
- Laptop
- Air Server
- iPad Pro
- Airpod Pros (Microphone)
- Cell Phone with Remind text messaging.
- In Class Speakers
- Spotify for music
Interactive Notebook (Printouts)
Classroom Setup
**Participation & Zoom Requirements**

- Since this class is both a “live online” class and an in-person class, we will be meeting live and virtually (on Zoom) on Wednesdays from 12 – 1:50pm.

- During this time, it is expected that you:
  - Have your camera turned on so we can see your BEAUTIFUL face 😊.
  - Have your microphone muted when you are not speaking.
  - Have your notebook ready to take notes and engage in the lesson.
  - Get ready to talk to other classmates about math problems.
  - Have other distractions minimized (checking social media, texting on your phone, having conversations with people in the background, etc.) during our class meeting times.
  - Have your device fully charged so that you have enough power.

- Not meeting the above expectations may result of the removal of you from our virtual meetings which will affect your attendance for the course.
How did we prepare to TEACH HyFlex?

Teaching

Modifying in-person Activities to give the live online students the same experience.

Building Community - How do you get the in-person students to interact with the live online students?

Communication - How will you share work during the class?
Virtual Manipulatives for Live Online Students

Mathematics Blog

An Open Educational Resource for Students and Faculty

Virtual Manipulatives

Click on a tile to explore the virtual manipulative. For demonstrations on how to use these resources, visit the Virtual Manipulatives playlist. Videos that demonstrate math concepts using virtual manipulatives are available in the Whole Numbers, Integers, Fractions, and Decimals and Percents playlists at the Mathispower4u Youtube channel.

For parents and families assisting their children with their math homework, we recommend Math Power: Simple Solutions for Mastering Math by the Rodel Charitable Foundation. It will give you the tools and resources to help support what students are learning in class. The Math Power book is also available in digital form, both in English and Spanish formats.
Modifying Assignments Continued...

**LET'S DO AN ACTIVITY**

Find the **Theoretical** probability of pulling a yellow cube.

After completing the activity, what story? Which is the more accurate? (Experimental vs. Theoretical)

---

3. Now that you have seen the contents of the bag, find the **Theoretical Probability** for choosing a yellow cube.

4. What's the moral of the story? Which is better experimental or theoretical? Which probability is more accurate?
Building Community

https://www.kaganonline.com/workshops/events/index.php
Communication - Sharing work from the virtual space to in-person and vice versa

Determine the measure of each of the angles in the pattern blocks

- Write the measure next to each angle. Use known angle measures to help you determine the number of degrees in other angles. Do not use a protractor.

- How did you find the angle measures of the thin rhombus? Draw a picture of your method(s) below and explain in words.

You will upload this to Canvas! Make sure you have drawings to support your thinking!
Challenges...

The mental drain on trying to teach to a computer screen BUT still remembering about your students in person and vice versa.

Technology issues were crippling on both ends to meet your students needs, caused logistical issues.

*shaking fists*
Really Great Things...

YES...there were some...

Students almost NEVER had a reason to miss class.

Allowed students who would normally NOT be able to take a class during work hours to attend (at their workplace) online.

HOME Assignment development
Interested in teaching HyFlex?
Where to Start…

- Modifying an activity that you normally do in a ‘face-to-face’ environment.
- Using break out rooms for group work paired with Kagan strategies.
- Brainstorm about the technology you have access to and how it fit in with a HyFlex model.
Let’s Talk Breakout Rooms...

Think about...
- How will you put the students in groups?
- Who will talk first?
- How will they share their work with your in-person students?
- How will they share their work with each other?
- What will you do if you only have ONE student in person?
Questions?

Please fill out our survey on the Whova App.