Tech with Heart:
Using Technology to Bring Compassion Back into the Classroom

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Director of Innovation & Educational Technology

techiemusings.com
#TechWithHeart
@buddyxo

Illustration by Kate Moore
Welcome! Today we’ll talk about:

1. Why the right technology can make a difference
2. My own personal journey: from the student I was to the teacher I’ve become
3. Ways to use these tools to empower all students to contribute to the conversation
4. Take a moment to reflect; Q&A’s
Adults constantly raise the bar on smart children, precisely because they’re able to handle it. The children get overwhelmed by the tasks in front of them and gradually lose the sort of openness and sense of accomplishment they innately have. When they’re treated like that, children start to crawl inside a shell and keep everything inside. It takes a lot of time and effort to get them to open up again. Kids’ hearts are malleable, but once they gel, it’s hard to get them back the way they were.

—Haruki Murakami, Kafka on the Shore
Describe a time when technology was the solution to a problem in your learning setting.
It's not about the tools, it's about the why.

Technology has allowed me to:

• Get to know my students as individuals
• Deepen the relationships I can build
• Hear from each and every student
• Be the most efficient teacher I can be
Lack of **TIME** is often the issue
With time and reduced anxiety, students were suddenly becoming resourceful and independent.
‘A Welcome to the Flipped Classroom’

SO WHAT’S REALLY FLIPPED ABOUT THE FLIPPED CLASSROOM?

Role of student = resourceful & independent, responsible & helpful

Classroom climate = collaborative and supportive, mistakes are part of the learning process

My role = facilitator & guide

Listening to questions & joining THEIR discussions
5.1 - Areas and Distances (Riemann Sums, Right/Left/Midpoints)

Stacey Roshan

The area that we have just approximated, using right endpoints, is an overapproximation of the actual area under the curve.
Analytics to Inform Class Needs

Assignment:
4.6 Optimization Problems - Hints for Identifying How to Set Up & Solve

Grade: 58/100
Video watched: 100%
Correct responses: 7/12 answered
Time spent: 24min

Video views per portion:
- 01:34
- 03:09
- 04:44
- 06:19
- 07:54
- 08:29
- 11:04
- 12:39
- 14:14
- 15:49
On Building Trust

Read their messages. React to them. They’re paying attention.

“Thanks for making this long video. It is very helpful to get us into the review mode and very helpful for us to see what we need to work on, what we remember and what we do not from the materials.”

“16 was a little confusing at first but I understand it now”

“Made it through, I’m tired”

arghmyteethhurts@igotbraces.msroshan.com
Iforgotabouttheslantedasymptotemsroshann.com
i_am_eating@home.now
imsick@gmail.com
himsroshan@gmail.com
ughhhlongvideomsroshannnn@gmail.com
happy@moo.cow
"How can we shift from a first is best culture to one that sends the message that everyone's voice matters—and that everyone has the potential to excel in the classroom?"

—Tech with Heart
Have you ever had trouble quickly responding or verbalizing what's in your head when put on the spot?

Many Times

Never
Flipgrid: Using Technology Students Have in Their Pockets

Goal: To LISTEN to the student’s THOUGHT process
Some kids naturally have a voice that shines bright in classroom discussion. Others find their creativity in assignments where they have a chance to sit & think. Some kids thrive off the energy of a loud group brainstorm. Others need a moment of quiet to process independently. Empowering student voice involves finding platforms that allow all these unique voices & personalities to shine & be heard. And for students to know that there are a variety of ways to contribute their ideas and make an impact.

-Stacey Roshan (@buddyxo)
How can we, as educators and leaders, embrace technology to ensure all voices in the room are heard?
Draw the planet that comes after Jupiter!
Pretend your friend was absent from class today...

Write what you would say if you had to explain the lesson to your friend.
MV Task #1
We want to create a box with an open top and square base with a surface area of 50 square inches. What height will produce a box with the maximum possible volume?

Draw a picture and label the information you’re going to need for this problem.

MV Task #2
We want to create a box with an open top and square base with a surface area of 50 square inches. What height will produce a box with the maximum possible volume?

Draw a picture and label the information you’re going to need for this problem.

MV Task #3
We want to create a box with an open top and square base with a surface area of 50 square inches. What height will produce a box with the maximum possible volume?

Draw a picture and label the information you’re going to need for this problem.

MV Task #4
We want to create a box with an open top and square base with a surface area of 50 square inches. What height will produce a box with the maximum possible volume?

Draw a picture and label the information you’re going to need for this problem.

MV Task #5
We want to create a box with an open top and square base with a surface area of 50 square inches. What height will produce a box with the maximum possible volume?

Draw a picture and label the information you’re going to need for this problem.

MV Task #6
We want to create a box with an open top and square base with a surface area of 50 square inches. What height will produce a box with the maximum possible volume?

Draw a picture and label the information you’re going to need for this problem.
How do we give *all* students an opportunity to be "vocal" in classroom discussions without calling them out or making them feel uncomfortable?
There is tremendous learning that can happen in talking about all responses and this critiquing process can easily happen using Pear Deck.
**$200 Question from Integrals**

A table of values for a continuous function $f$ is shown above. If the most straightforward of all it is kept which of the following statements are true? If $\int_{a}^{b} f(x) \, dx$ is the definite integral of $f(x)$ from $a$ to $b$.

- (A) $\frac{5}{4} + 6 + 0 = 10$
- (B) $5$

**$200 Question from Limits**

If $f(x) = e^x$, which of the following is equal to $f'(0)$?

- (A) $\frac{e^0 - 1}{0}$
- (B) $\frac{e^0}{0}$
- (C) $\frac{e^0 - 1}{0}$

**$500 Question from Limits**

The limit as $h \to 0$ for $\frac{\tan 3(x + h) - \tan 3x}{h}$ is

- (A) 0
- (B) $3\sec^2(3x)$
- (C) $\sec^2(3x)$
- (D) $3\cot(3x)$
- (E) nonexistent

$$\tan 3x$$

$$\sec^2 3x, 5$$

Use this space for notes:
# Pear Deck Takeaways

## Part 1 - Summary

Use this space to summarize your thoughts on the lesson.

I now better understand the limit definition of a derivative, both visually and algebraically. I can see that as $h \to 0$ means we are pulling those two points close together and how the secant line approaches the tangent line. And I can now recognize that the limit formula can represent the derivative of a function at a point.

## Part 2 - Responses

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<th>Slide 1 - Drawing</th>
<th>Your Response</th>
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<td><img src="image2" alt="Your Response" /></td>
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**Extension:** 2.4-2.5
Evaluate: $\lim_{x \to \infty} \frac{e^{x+5}}{x^2}$

Use this space for notes:

Remember to look at the graph of $e^x$ to determine end behavior at positive vs negative infinity.

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**Extension:** 2.4-2.5
Evaluate: $\lim_{x \to \infty} \frac{e^{x+5}}{x^2}$

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<th>Your Response</th>
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**Ellipse**
(Similar to cross-sections worksheet, #1)

The base of $R$ is the top half of the elliptical region given by the equation $9x^2 + 4y^2 = 36$. Cross-sections perpendicular to the $x$-axis are isosceles right triangles where the base is one of the sides of the triangle. Find the volume (set up, but do not solve).

<table>
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**Ellipse**
(Similar to cross-sections worksheet)

The base of $R$ is an elliptical region given by the equation $9x^2 + 4y^2 = 36$. Cross-sections perpendicular to the $x$-axis are isosceles right triangles where the base is one of the sides of the triangle. Find the volume (set up, but do not solve).

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*Students browse: [docs.google.com/document/d/1P2izP5Yp030SsMWtaJC23B3JlXSA6Rvx3wDts]/*
Fostering a Culture of Peer-to-Peer Learning

#GridPals

Connect with fellow Flipgrid educators and classrooms around the world! First, make sure your profile is up to date with the grade and subjects you teach as well as your social media accounts. Next, activate your #GridPals status and start connecting!

Check out the #GridPals Guide by Bonnie McClelland.

14878 GridPals are on the map!

Select a grade and subject, or search GridPals.
PART 1: Create a video solution

PART 2: Create a video ‘critique’
- compare the solution and explanation to the **scoring guidelines**.
  - would any points have been missed? if so, what would you add?
- particular strengths
- areas the video solution skimmed over
- things you would have done differently if you were to solve this problem
- one major takeaway from watching how your classmate solved this problem

Flipgrid Collab: Connecting with Students Outside Our School
"When you practice elaboration, there's no known limit to how much you can learn. Elaboration is the process of giving new material meaning by expressing it in your own words and connecting it with what you already know. The more you can explain about the way your new learning relates to your prior knowledge, the stronger your grasp of the new learning will be, and the more connections you create that will help you remember it later." —Peter C. Brown, Make It Stick
How can you leverage edtech tools to equalize the learning experience for all students in your classroom?
How can we cultivate COMPASSION in our classrooms through the INTENTIONAL integration of TECHNOLOGY into the DESIGN of our LESSONS?
It is my hope that more and more teachers will look to the tech with whole-child well-being in mind. It is through that lens that we can discover ways to humanize the classroom through the intentional integration of technology into the design of our lessons.
Some people argue that using technology in education feels automated and less personal. I’ve found the exact opposite to be true.

- Stacey Roshan
Taking a pause to reflect...
If we empower students with the resources they need and coach them through the process of using these tools, then students can take ownership for their learning. And that's where the magic happens.

by Stacey Roshan
Discussion time!

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Get Started

What do I get with Pear Deck Premium?
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