

WHAT'S MISSING IN ONLINE TEACHING?

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- Online and hybrid teaching offers many advantages and new opportunities



- Unfortunately, many of us discover that lessons brought over from the physical classroom don't survive first contact with the online learner
- For me, the key to improving the online learning experience for my students was to think deliberately about what did *not* transfer over from the physical classroom, so I could fill those gaps in other ways.
- I'll start by introducing what I found missing in the online environment, then discuss some ways I've found to respond

My background

Online MBA

Strategy capstone
Five weeks
Entirely online
Asynchronous

Pre-session teaching

Executive MBA
One week of online before
four weeks of in-person
teaching
Asynchronous
Digital education working
group, MBS

- May be helpful to know about my online experiences



Parent of a student
who struggles with
online learning

- I'm also the parent of a young woman on the autism spectrum who has really struggled with online learning.
- From my observations and limited reading, I think that online learning poses extra challenges for many neurodiverse learners
- As we expand the reach of online education, we'll have more neurodiverse learners in our programs.
- We have legal and pedagogical obligations to be sure our programs serve their needs also. Fortunately, i think a lot of the lessons I've learned about how to maximise the online learning environment for neurotypical students also pay dividends for many neurodiverse students.



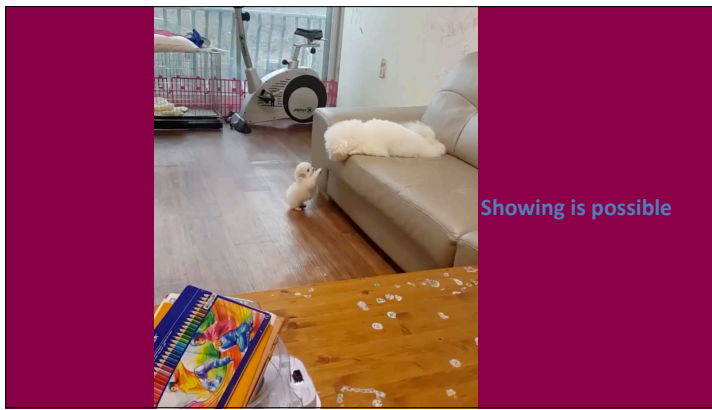
Gauge comprehension

- In the physical classroom, it is easy to determine when students aren't getting a lesson.
- In the online setting
 - It is much harder to detect this
 - We can't respond meaningfully to confusion with pre-recorded materials

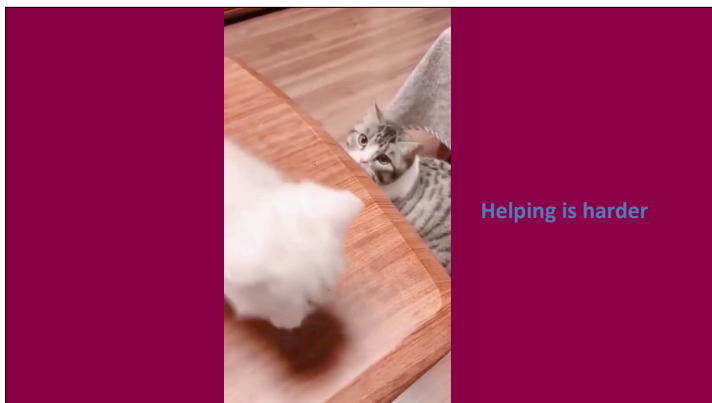


Attention spans are limited

- Many online learners are often non-traditional students, meaning their time and energy is limited
- We are more likely to be competing with other stimuli (youtube, making dinner, etc.) in the online setting
- We can't tell when the students are zoning out
- It is harder to counter loss of attention with our own energy, active learning exercises that get students moving and interacting, etc.



- Recognising the we won't have class discussion to, say, work through a case, many of us rely on showing rather than telling.
- For example, we may record a video of how we would do a Five Forces analysis for a given industry
- That's great and works well in the online setting, but...

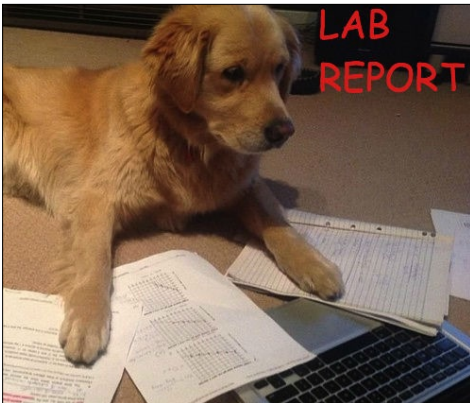


- We may not realise the degree to which we scaffold in the physical classroom. That is, we launch students on a task and then step in as needed to redirect, support and challenge
- That type of help is much harder in the online, particularly the asynchronous, class.



Failure is likely on first attempt

- The result is that students often fall short in their first attempts to apply lessons on their own.



LAB
REPORT

Homework
Time-consuming for
student & instructor

- Homework often takes an outsized role in online settings as our main mechanism for gauging understanding, advancing learning by providing feedback and evaluating towards a grade. It often replaces the end-of-class debrief in the physical classroom.
- As a result, grading for online is often much more detailed and thorough.
- Of course, that means it can be more time-consuming for both students and professors Both are aggravated when the online class is compacted, as many are. In my ASU experience, for example, assignments turned in Sunday really needed to be returned to students by Tuesday if they were have time to integrating that feedback into their next assignment.
- To mitigate that challenge, we often use group assignments, which theoretically offer the added advantage of students learning from each other.



Successful completion
doesn't mean mastery

- Especially in group assignments, the fact that the group successfully completed an assignment doesn't mean any individual student has really mastered the material.



Frustration can kick in
Material
Tools

- Students can end up being frustrated with the limited mastery of the material
- Compounding that can be frustration with technical issues. Some technology is great, but we need to be honest that online learning system still have some rough edges
- It's easy for the frustration to escape our notice until it reaches explosive levels

Problems and solutions

Hard to gauge comprehension
Attention spans are limited
We can show, but helping is harder
Failure is likely on first attempt
Homework is time-consuming
Successful completion doesn't mean mastery
Frustration with tools and material is likely

- Next, let me discuss some lessons I've learned that help fill one or more of these gaps, allowing us to deliver on the promise of the online classroom.
- For each, I've flagged up the challenges it particular responds to

Problems and solutions

Hard to gauge comprehension Keep "lessons" short
Attention spans are limited
We can show, but helping is harder
Failure is likely on first attempt
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- Lessons, e.g., a video lecture, need to be *short*. Five to seven minutes at the outside.
- Makes it easy for student to review as needed.
- So, a 30 minute presentation on Five Forces will become a series of five minute videos—maybe one per force and an overview

Problems and solutions

Hard to gauge comprehension

Attention spans are limited

We can show, but helping is harder

Failure is likely on first attempt

Homework is time-consuming

Successful completion doesn't mean mastery

Frustration with tools and material is likely

Create opportunities to gauge comprehension without evaluation

In lecture quizzes

Discussion board

Office hours

- Several technologies that make it easy to include “quizzes” within video that have to be completed before the student can continue, but don't have to be connected to grades. Detailed feedback can be programmed into these.
- Discussion boards can be a good arena to probe students' actual level of understanding
- “Office hours” are especially important
 - I have formal office hours, but also encourage students to just email me whenever they want to talk
 - Conferencing tools like Adobe Connect aren't necessarily the best. If your students are already familiar with Zoom, Skype, Slack, etc., consider using those tools.
 - I usually get more students using office hours when I teach online, which I consider a good sign that I've built a relationship with them.

Problems and solutions

Hard to gauge comprehension

Attention spans are limited

We can show, but helping is harder

Failure is likely on first attempt

Homework is time-consuming

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Frustration with tools and material is likely

Balance group and individual work

- Group work is great for consolidating teaching, but we need to do some individual work in order to ensure each student is mastering the material
- Individual work may be a good candidate for assignments that can be graded either automatically or by a TA.

Problems and solutions

Hard to gauge comprehension

Ask “why?” questions

Attention spans are limited

We can show, but helping is harder

Failure is likely on first attempt

Homework is time-consuming

Successful completion doesn’t mean mastery

Frustration with tools and material is likely

- Use why questions to probe students mastery of the material. We can’t really apply the Socratic method (at least in the asynchronous setting), but pushing students to explain their reasoning is useful.

Problems and solutions

Hard to gauge comprehension

Feedback, feedback, feedback

Attention spans are limited

Short post-grading feedback videos

We can show, but helping is harder

Discussion boards

Failure is likely on first attempt

Homework is time-consuming

Successful completion doesn’t mean mastery

Frustration with tools and material is likely

- This goes both ways
 - Seek feedback from the students to replace your ability to read faces and body language in the physical classroom
 - Give detailed feedback when grading
 - I’ve found it useful to provide a short, informal video after grading an assignment, revisiting points that were frequently misunderstood. Advantages include
 - A first screen for questions—ask students to start by watching the video and *then* coming to you with anything that still remains unclear
 - Better learning for the 1/3 to 1/2 of the students who watch. Some won’t watch because they did well on the assignment; others because they don’t care. I’m okay with supporting the dedicated ones
 - Gives the students a sense that you are actually involved, rather than having filmed the class 3 years ago and then not thought about it.

Problems and solutions

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Cumulate

- Something we probably do without thought in the physical classroom
- Give students multiple cuts at the material.
- For example, if I start a class with external analysis, every subsequent assignment will have at least some reference to external analysis.

Problems and solutions

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Be hyper organised

- In the physical classroom, we can be pretty fluid. For example, we can rearrange material to meet the scheduling needs of guest speakers or decide to spend more time on a certain topic than originally planned.
- That doesn't work in the online setting.
 - Partly this is the nature of the modal student and the demands on their time
 - Because material is often spread across multiple pages on a class's site, it is already harder to grasp in its totality than it would otherwise be
 - This seems to be a particular pain point for many neurodiverse students
- I've developed a work flow that let's me produce a PDF that mirrors almost all of the online material in a single documents that students can print out, mark up, and use as an ongoing physical reference.

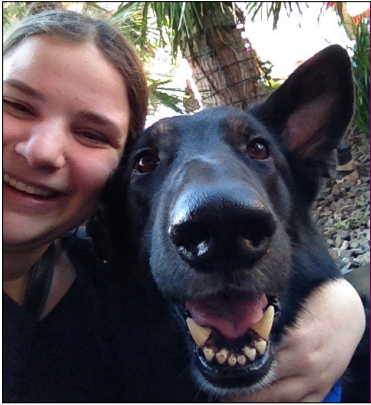
Problems and solutions

Hard to gauge comprehension	Evaluate tools critically
Attention spans are limited	
We can show, but helping is harder	
Failure is likely on first attempt	
Homework is time-consuming	
Successful completion doesn't mean mastery	
Frustration with tools and material is likely	

- Don't use any learning tools "just because". Be clear how you expect it to improve the learning experience and then be sure that it does so well enough to merit its improvement.
- Remember that every new tool is a new tool that students have to learn and a new opportunity to discover technical problems.

Problems and solutions

Hard to gauge comprehension	Keep "lessons" short
Attention spans are limited	Create opportunities to gauge comprehension without evaluation
We can show, but helping is harder	Balance group and individual work
Failure is likely on first attempt	Ask "why?" questions
Homework is time-consuming	Feedback, feedback, feedback
Successful completion doesn't mean mastery	Cumulate
Frustration with tools and material is likely	Be hyper organised
	Evaluate tools critically



Good luck!

