



ELITE MEDICAL PREP

Best Practices for Presenting a Medical School Course in an Online Format:

**Lessons Learned from the 2020
USMLE Step 1 & Step 2 CK Board
Review Courses at Mt. Sinai School
of Medicine**

Presented by: Nina Kagan, MA;
Marcel Brus-Ramer, MD, PhD

Meet Today's Presenters



Marcel Brus-Ramer, MD, PhD

Mt. Sinai Course Director
& Lecturer

Elite Medical Prep Founder,
Emergency Radiologist



Nina Kagan, MA

Mt. Sinai Course Support

Elite Medical Prep
Learning Advisor

*Live on the chat
Ask him anything!*



Ken Rubin, MD

Mt. Sinai Course Co-Director
& Head Lecturer

Elite Medical Prep Founder



Goals of Today's Workshop

- Key features and unique structure of a success online teaching session
- Leverage important tools available in the online format
- Discuss common mistakes that are often made while trying to conduct an online class and how to avoid them



01

Meet Today's Presenters

Say hello to Marcel, Nina, and Ken

02

Ranking Breakout Activity

What makes an effective digital learning session?

03

Debrief & Discuss

What was the thought process behind making your rank list?

04

Our Rank List

Key elements to an effective digital learning session based off our experience

05

Q&A

Ask any specific questions to Nina, Marcel, or Ken



Ranking Breakout Activity

Please rank the following elements of a successful online teaching session in order of most critical (1) to least critical (10)

- A.** Use of Breakout Sessions
- B.** Post Session Q&A Period
- C.** Required Use of Video by Participants
- D.** Question Based Learning
- E.** Integrated Live Polling
- F.** Ability to live chat during presentation
- G.** Flipped Classroom Structure
- H.** Multiple Concurrent Presenters
- I.** 2-3 Hour Session Length
- J.** Free Text Response Questions

What are some common mistakes that are made in online teaching in your experience?

MELS: Please rank the following elements of a successful online teaching session in order of most critical (1) to least critical (10)

- A. Use of Breakout Sessions
- B. Post Session Q&A Period
- C. Required Use of Video by Participants
- D. Question Based Learning
- E. Integrated Live Polling
- F. Ability to live chat during presentation
- G. Flipped Classroom Structure
- H. Multiple Concurrent Presenters
- I. 2-3 Hour Session Length
- J. Free Text Response Questions





Our Opinion: *At A Glance*

- 1) Flipped Classroom Structure**
- 2) Question Based Learning**
- 3) Integrated Live Polling**

Foundational
Elements



Our Opinion: *At A Glance*

1) Flipped Classroom Structure

2) Question Based Learning

3) Integrated Live Polling

4) 2-4 Hour Session Length

5) Multiple Concurrent Presenters

6) Ability to Live Chat During Presentation

Foundational
Elements

Enhancing
Elements



Our Opinion: *At A Glance*

1) Flipped Classroom Structure

2) Question Based Learning

3) Integrated Live Polling

4) 2-4 Hour Session Length

5) Multiple Concurrent Presenters

6) Ability to Live Chat During Presentation

7) Use of Breakout Sessions

8) Post Session Q&A Period

Foundational
Elements

Enhancing
Elements

Optional
Elements



Our Opinion: *At A Glance*

- 1) Flipped Classroom Structure
- 2) Question Based Learning
- 3) Integrated Live Polling
- 4) 2-4 Hour Session Length
- 5) Multiple Concurrent Presenters

- 6) Ability to Live Chat During Presentation
- 7) Use of Breakout Sessions
- 8) Post Session Q&A Period
- 9) Required Use of Video by Participants
- 10) Free Text Response Questions

Foundational
Elements

Enhancing
Elements

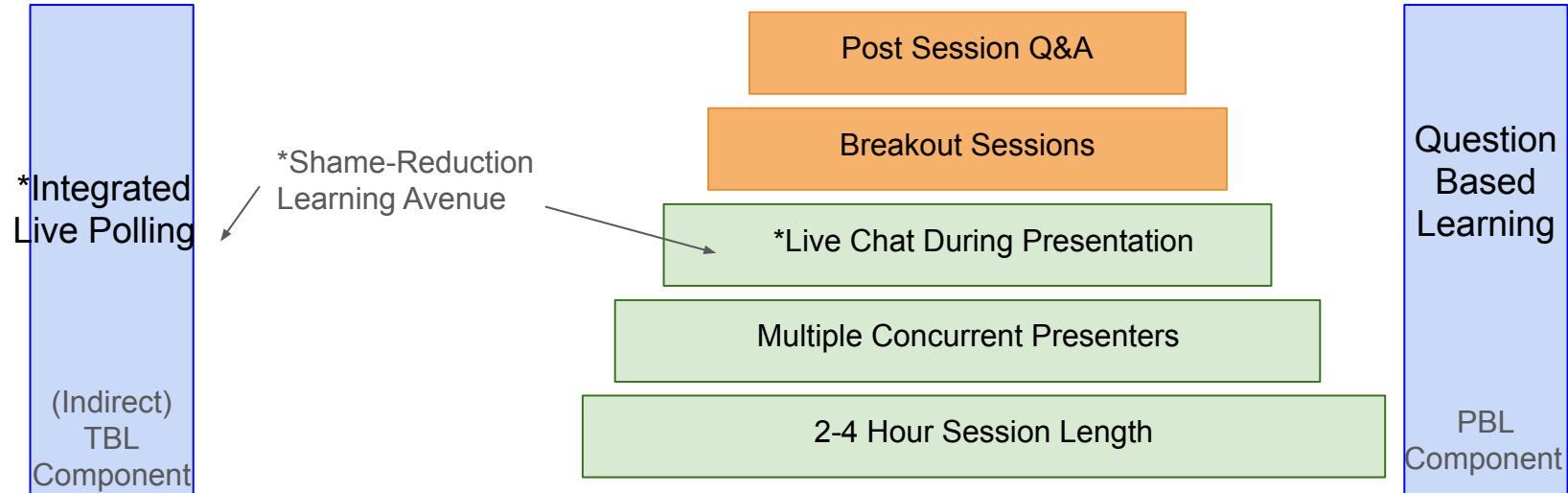
Optional
Elements

Nice but not necessary
Elements

Our Approach:



Flipped Classroom Structure Active Learning Format



Required Use of
Videos by Participants

→ *More important for
children, not for medical
students*

Free Text Response
Questions

→ *Can be overly time
consuming in a virtual
setting with a large group*

#1 Flipped Classroom Structure

Active Learning Format

- In-class time is dedicated to discussions, interactive exercises, at-home tasks
- Instructors should focus on:
 - student difficulties/confusion
 - mixed knowledge levels of students.
- Lectures must provide **added value**.

Heather French, AnnaMarie Arias-Shah, Carly Gisondo, Megan M. Gray, Perspectives: The Flipped Classroom in Graduate Medical Education, NeoReviews, 10.1542/neo.21-3-e150, 21, 3, (e150-e156), (2020).

TRADITIONAL



Lecture



Homework activities

FLIPPED



Lecture



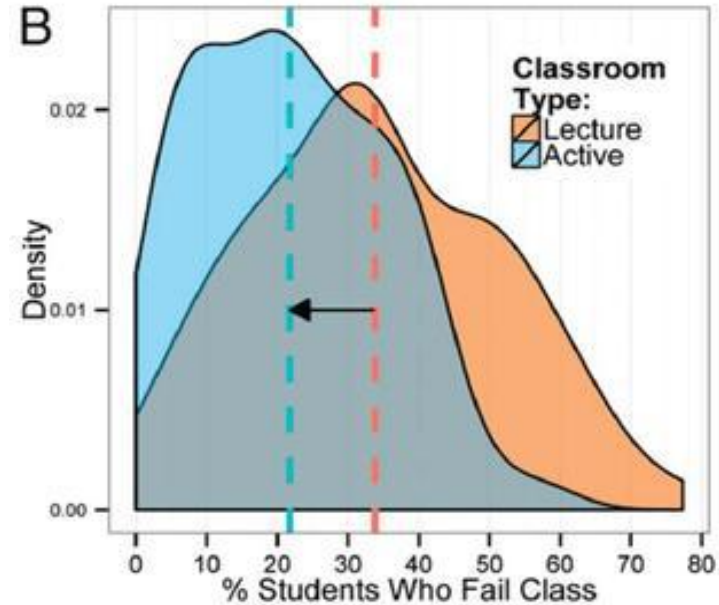
Classroom activities





#2 Question Based Learning (PBL)

- An active learning technique that ensures better practical learning, ability to create interest, and subject understanding.
- Gives opportunity for cross system connections



Preeti, Bajaj et al. "Problem Based Learning (PBL) - An Effective Approach to Improve Learning Outcomes in Medical Teaching." *Journal of clinical and diagnostic research : JCDR* vol. 7,12 (2013): 2896-7.
doi:10.7860/JCDR/2013/7339.3787

Freeman, Scott, Eddy, Sarah, et al, PNAS, June 10, 2014, vol. 111, no. 23, "Active learning increases student performance in science, engineering, and mathematics"

#3 Integrated Live Polling (TBL)

- Benefits of TBL (team-based learning) but with reduced student shame since polls are anonymous
- Students benefit from seeing how they stack up compared to other students, but **without risk of being singled out** as “behind.”
- Encourages active learning
- Simulates time constraints of actual exam



What is Student Shame?

A valuation of the self whereby students experience the painful feeling of believing they are flawed and therefore unworthy.

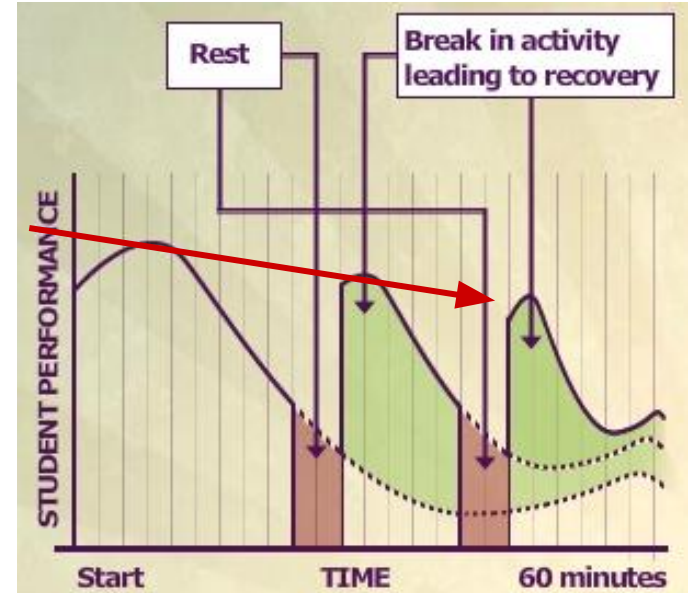
Coudret, D. J. (2020). Turning the spotlight on shame: Fostering adaptive responses to feelings of academic shame in medical students (10018). [ASU].





#4 2-4 Hour Session Length *WITH BREAKS

- **Exhaustion** → ineffective active learning environment
- Student attention drops over the course of an hour
- Our students often report really “get into” the material after 1-1.5 hrs.
 - 2.5hr-3hr is the “sweet spot”



Bligh, D. (2001) What's the Use of Lectures?
San Francisco: Jossey-Bass.



#5 Dual Presenters

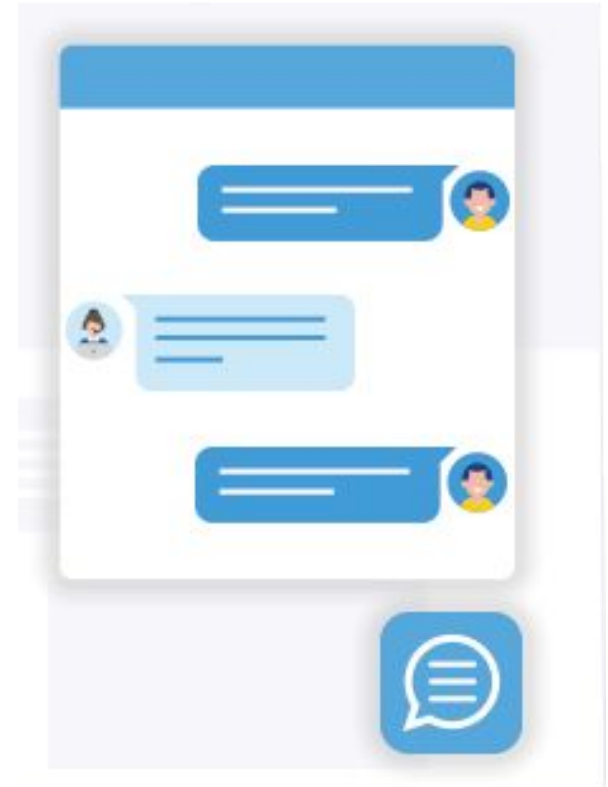
- Ideally two presenters with different teaching styles
 - Provides a change of pace, voice, style
 - Boosts attention
 - Accommodates different learning styles
 - Increased benefit for larger groups of students
 - Greater chance for different learning styles
- Allows for ability to live chat during presentation
 - Chat volume can grow exponentially with larger groups





#6 Ability to Live Chat During Presentation

- A.K.A. live ongoing Q&A
- Learning flow is not disrupted
 - students can ask questions and get answers immediately
- Saving questions until a break, students often simply choose not to ask their question
 - Best to clarify confusion on the spot





#7 Use of Breakout Sessions

- Another TBL Component
- *Success **highly** dependent upon student levels being **similar**
- Best used with:
 - small class sizes
 - more open ended material
 - time for back-forth discussion





#8 Post-Session Q&A Period

- **Beneficial in specific contexts**
 - student may have specific questions to the presenter
 - topic of inquiry may not be directly related to the presented material
- **Nice but often unnecessary**
 - live chat during the presentation decreases need





#9 Required Use of Videos by Participants

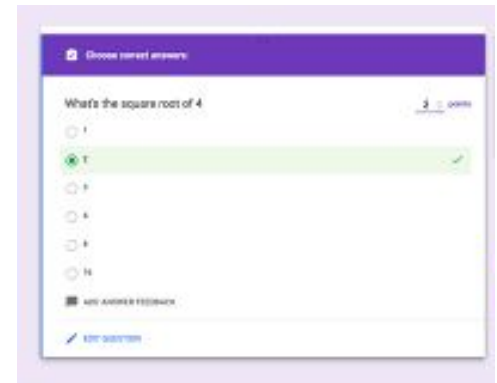
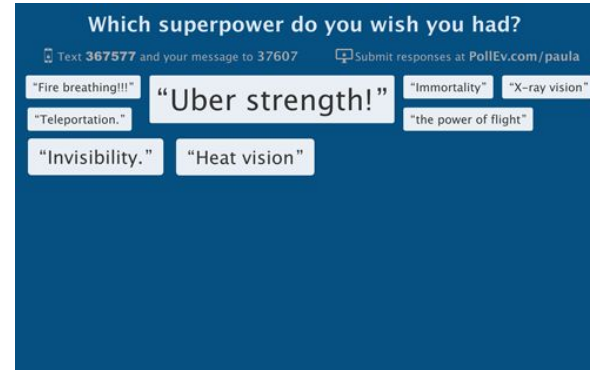
- Mandatory video often used to ensure participants are present and paying attention
- Our belief: Med students do not need to be policed into paying attention
 - Students are mature enough to take ownership for their own learning
- Actively engaging learning → Attention
 - Even with video cameras off participation via polls and chat provides **added value**





#10 Free Text Response Questions

- Not typically necessary and often overly time consuming
- Our recommendation:
 - Encourage students to jot down a few notes about their thought process while working through questions or problems
 - Useful to look back later and pinpoint areas of confusion to help guide studying





Quick Demonstration

Now that we've walked you through the key elements of a successful online medical learning session, lets see it in action in the same way we present with medical students in our courses.

USMLE Sample Practice Question

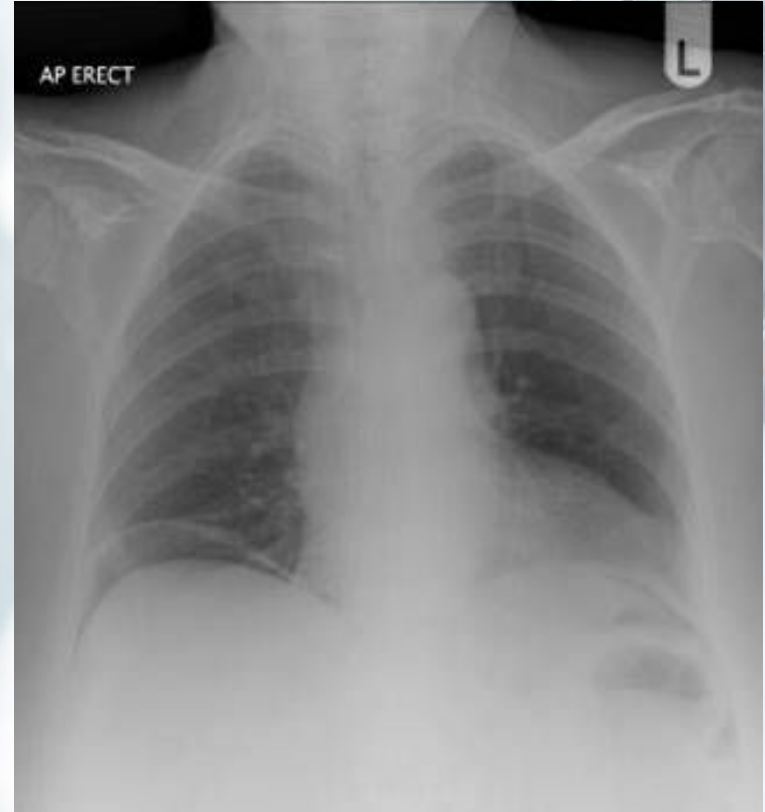
EMP 1st Year Booster Course--Cardiology



A 26 year old woman is brought to the emergency department by her roommate because of vomiting for 4 hours. She also has a 2 day history of fatigue and dizziness on standing. She has had severe heartburn for 3 months; treatment with over-the-counter antacids has provided some relief. The vital signs of the patient are T 35.6°C (96°F), pulse 110/min, and blood pressure 80/55 mm Hg. Physical examination shows marked pallor. Laboratory studies show a hemoglobin concentration of 6 g/dL and hematocrit of 18%. A chest x-ray is obtained (shown) and a pulmonary catheter is inserted and laboratory values are measured.

The patient is most likely experiencing which of the following types of shock?

- A) Anaphylactic.
- B) Cardiogenic.
- C) Hypovolemic.
- D) Neurogenic.
- E) Septic.
- F) Obstructive



When poll is active, respond at Pollev.com/elitemedical907

Text **ELITEMEDICAL907** to **22333** once to join

USMLE Style Question

A

B

C

D

E

F

G

H

I

J

K

Tc



0

USMLE Sample Practice Question

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EMP 1st Year Booster Course--Cardiology



3

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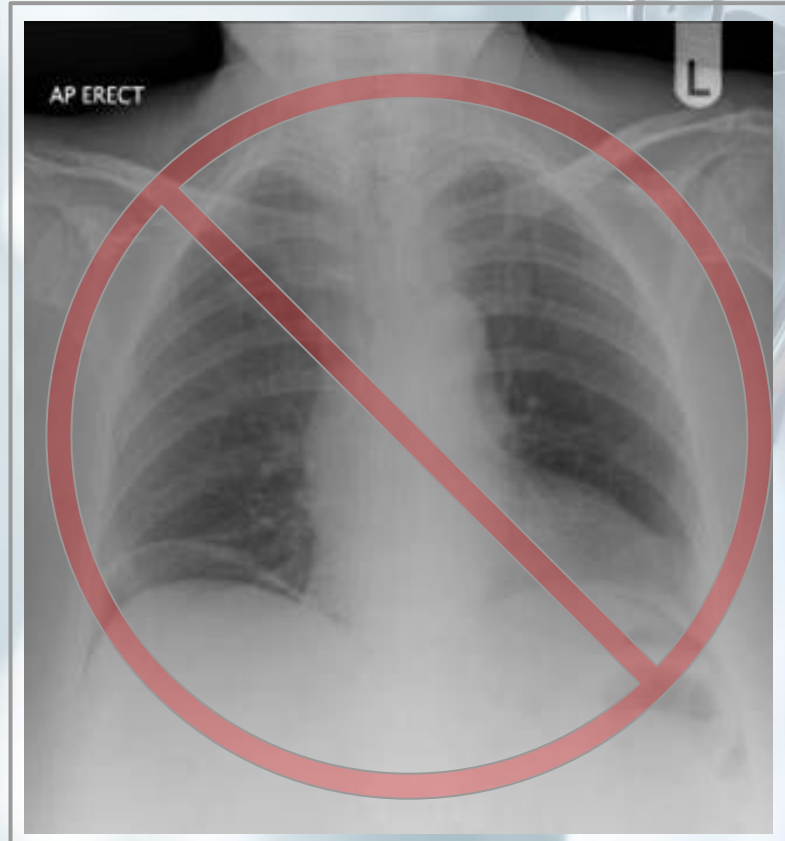
1

The patient is most likely experiencing which of the following types of shock?

2

- A) Anaphylactic.
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USMLE Sample Practice Question

EMP 1st Year Booster Course--Cardiology



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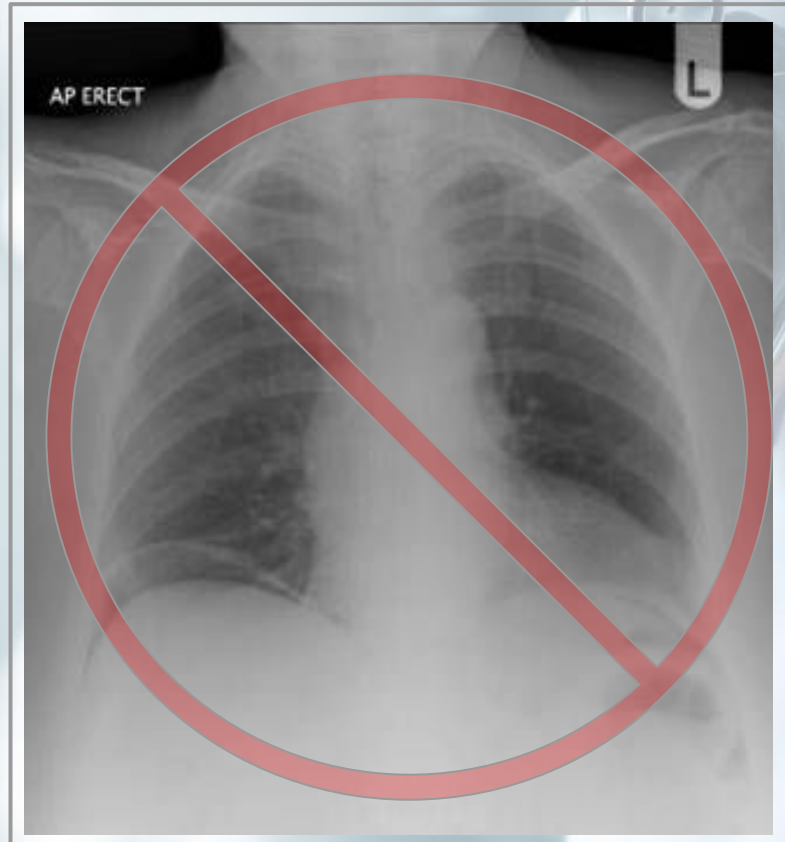
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4





Take-Away Points and Q&A

- Large group online medical courses can be improved by using some or all of the elements discussed today
- Foundational elements (active learning, PBL, TBL) create a structure into which other elements (enhancing, optional, additional) can provide significant student benefit
- Recommended practices are focussed to provide **added value** to the students
- Academic shame is reduced when these practices are implemented well
 - In particular: Live Polling & Live Chat



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[**www.elitemedicalprep.com**](http://www.elitemedicalprep.com)