Flipping the Classroom

How to turn your students' worlds upside down

Use a laptop, smartphone, iPad, etc:

Go to LCatalytics.com

Click "Create student account"

Click "I have a signup code"

use the signup code DEMO

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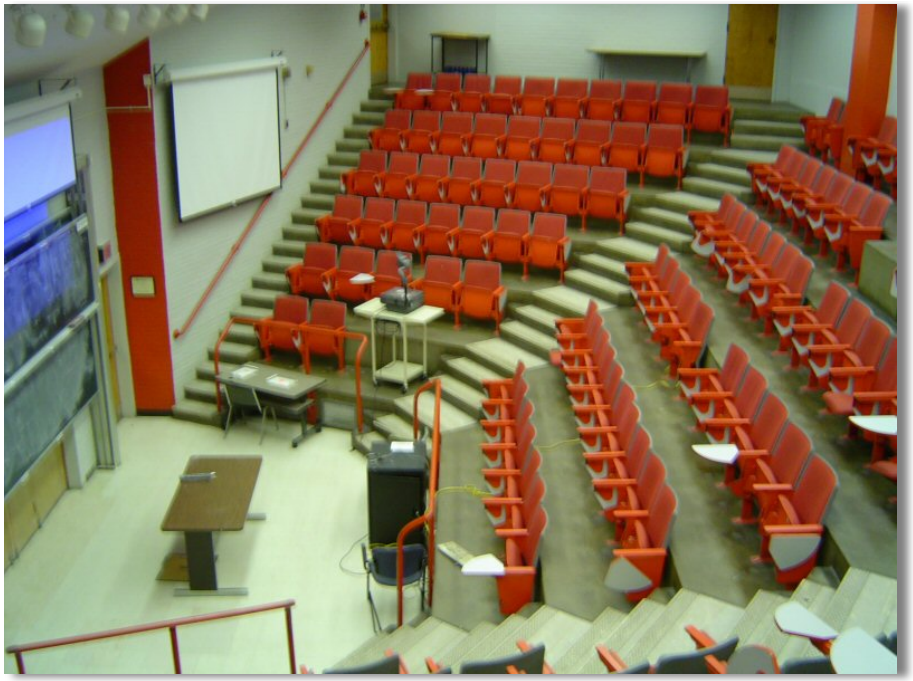
New England Board of Higher Education
15 October 2012
Boston, MA

Ancient Greek Amphitheater



Modern American Classroom

Problem?

“Education is suffering from narration sickness.”

Pedagogy of the Oppressed, Paulo Freire, 1970, p. 17

Consequence

Passive education creates passive people

Pedagogy of the Oppressed, Paulo Freire, 1970, p. 17

Solution

Limit passivity, boost engagement

Pedagogy of the Oppressed, Paulo Freire, 1970

Goals

After this talk you will be able to...

1. Have a sense of the history of the call for flipped classrooms
2. Explain basic steps for flipping a class
3. Describe 1 best-in-class flipped method and tool
4. Access resources for learning more about flipping classrooms

1 History of the call for flipped classrooms

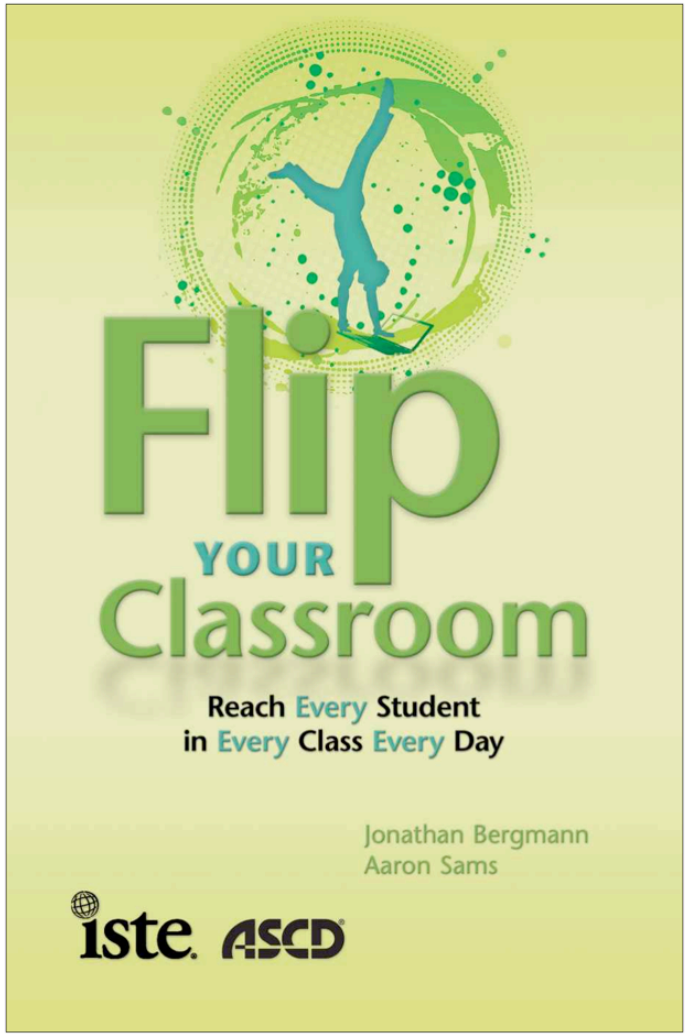
What is a Flipped Classroom?

"Flipping the classroom is...[a] mindset

redirecting attention away from the teacher and putting attention on the learner and the learning."

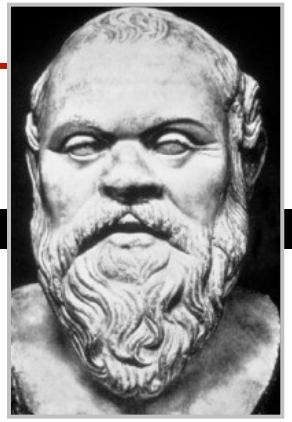
Bergmann and Sams p. 12

What is a Flipped Classroom?



One possible Flipped Class Timeline, with omissions

- BC 469



- 1870s
  - Langdell
- 1920s
  - Dewey
- 1970s
  - Freire
- 1980s
  - Lyman Think-Pair-Share
  - Michaelson TBL
- 1990s
  - Mazur Peer Instruction
  - Novak et al. JiTT
  - Hanson et al. POGIL
- 2006-2007
  - Bergmann & Sams Lecture Capture/ Flipped Classroom
- 2011-2012
  - Koller et al. Coursera

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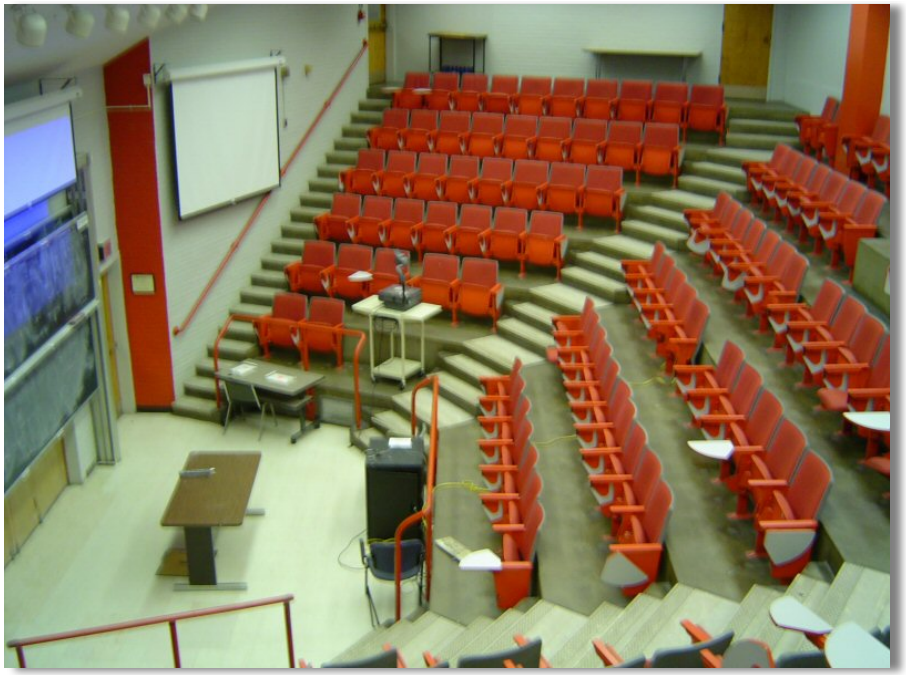
What is a Flipped Classroom?

School at Athens, the original flipped class

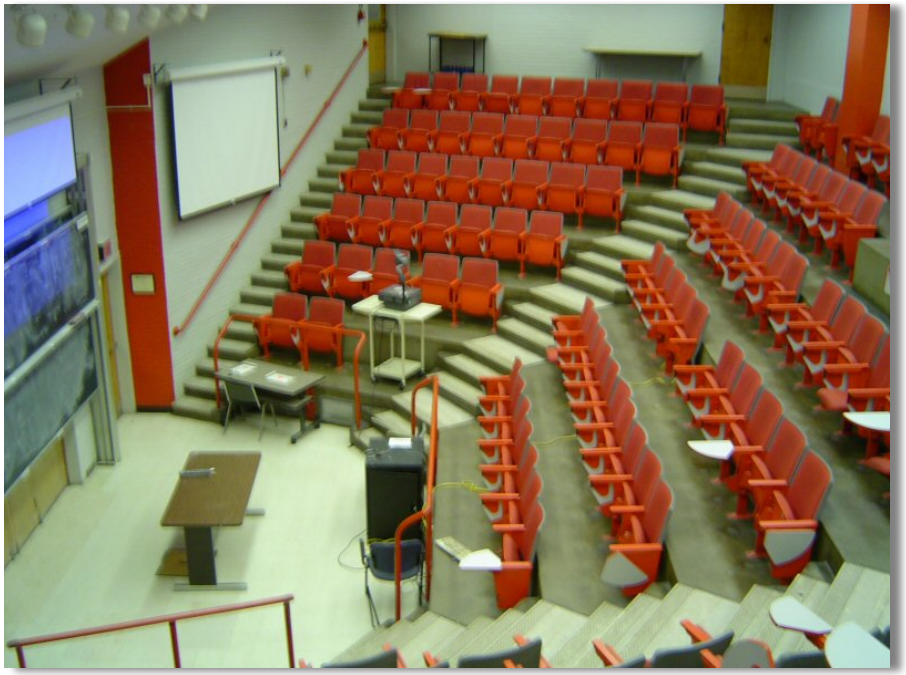
What is a Flipped Classroom?

a flipped class moves coverage out



What is a Flipped Classroom?

and moves uncoverage in...



2 How do you flip a class?

Basic Steps for Flipping a Class

Traditional Class

Class time: Lecture

At home: Homework

Basic Steps for Flipping a Class

Traditional Class

Class time: Lecture

At home: Homework

Vs.

Traditional **Flipped** class

Class time: Homework

At home: Lecture

Basic Steps for Flipping a Class

Traditional Flipped Class Protocol

Bergmann and Sams version

1. Video record lecture using screencast software

2. Put lecture online, require students to watch, give some instruction on effective viewing

3. Spend 10 mins of following class time talking about the video

4. Do traditional “homework” during class

Basic Steps for Flipping a Class

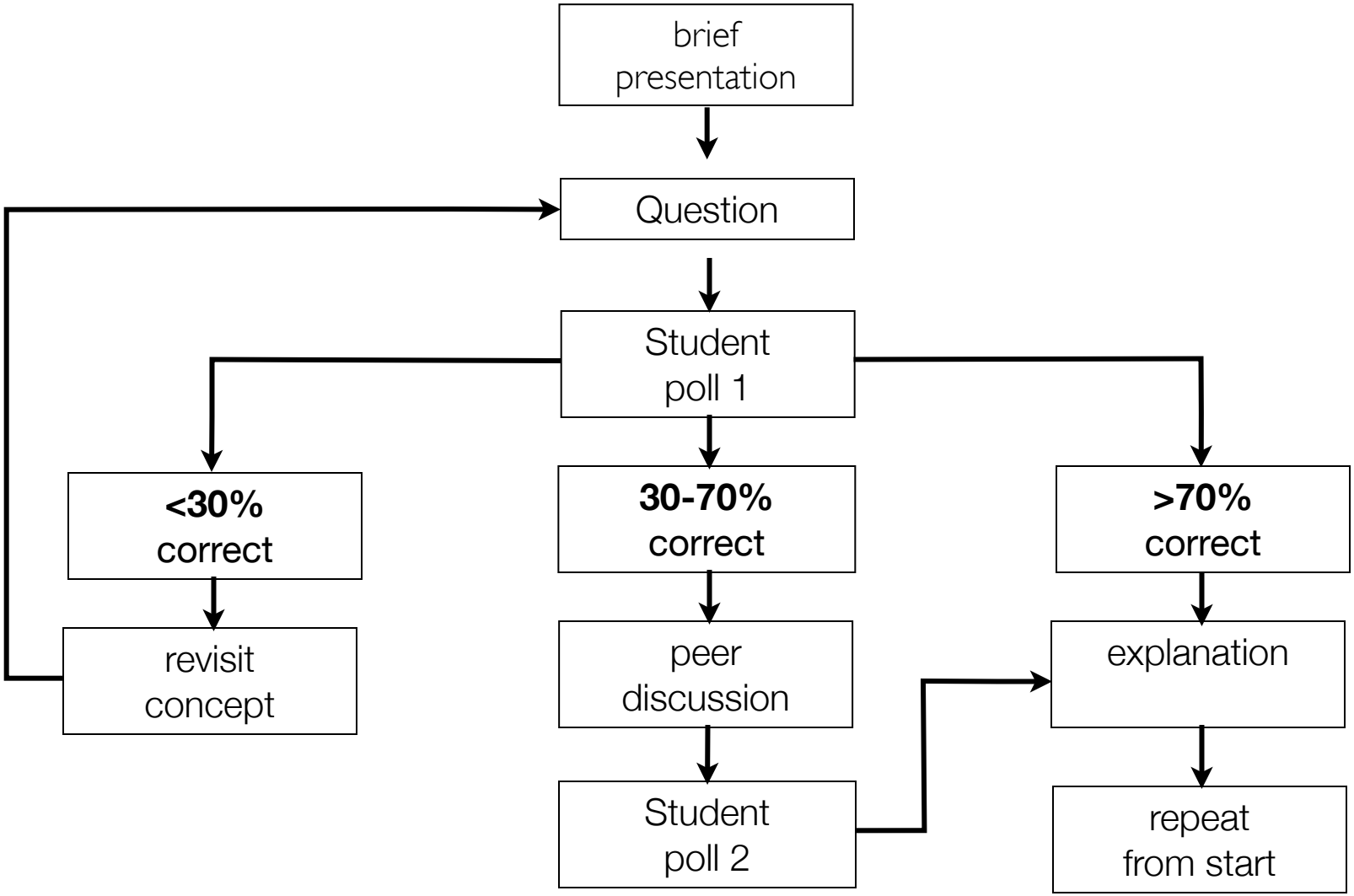
Bergmann and Sams use Flipped Classroom Mastery Model now

Traditional Classroom		Traditional Classroom	
Activity	**Time**	**Activity**	**Time**
Admin	5 min	Admin	5 min
Questions?	10 mins	Questions on video	10 mins
Lecture on new content	30-45 mins	Guided & independent practice	30-45 mins

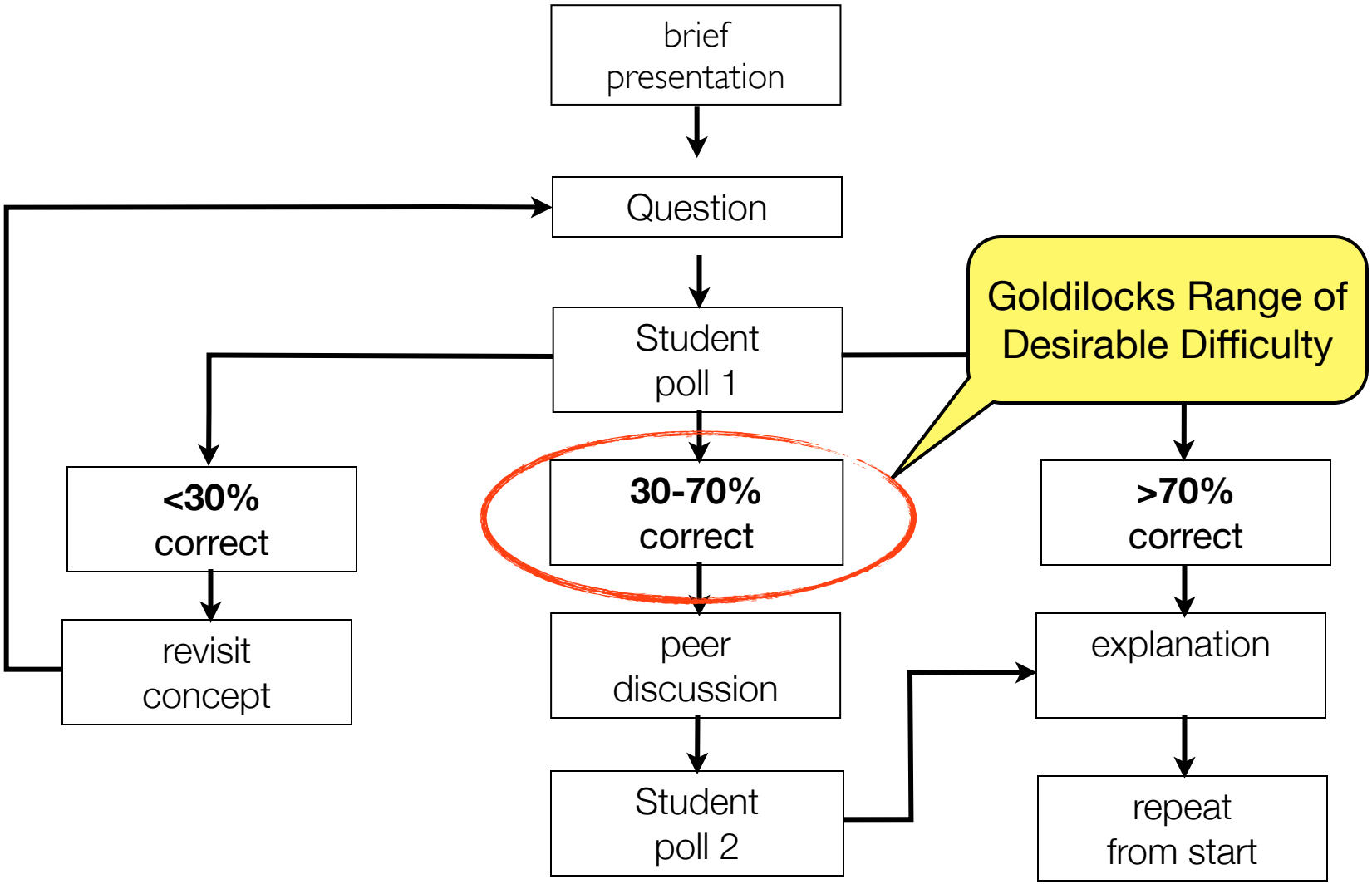
Adapted from Bergmann and Sams, p. 15

3 Best-in-Class Method and Tool

Peer Instruction

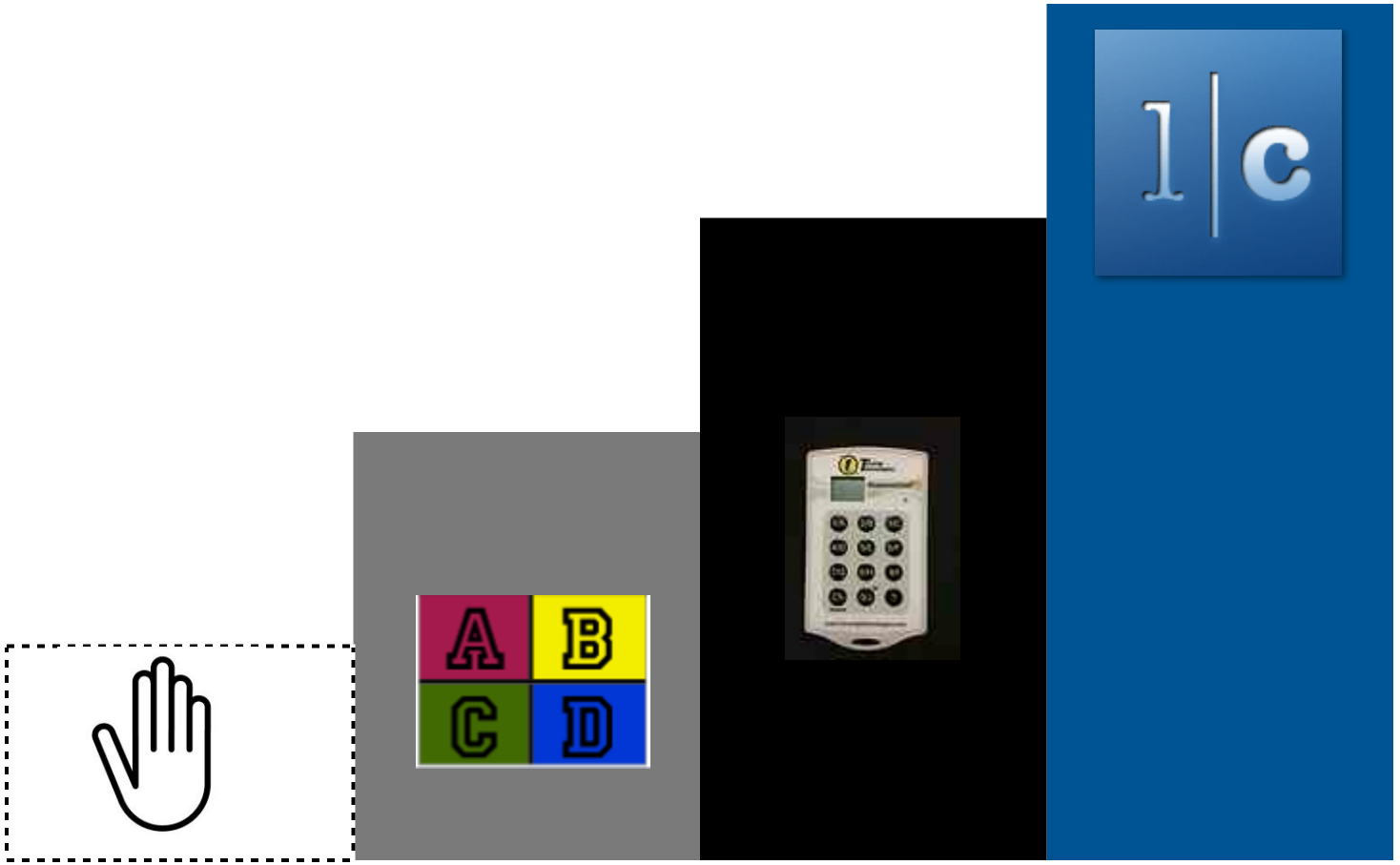


Peer Instruction



Peer Instruction

Evolution of Classroom Response Systems

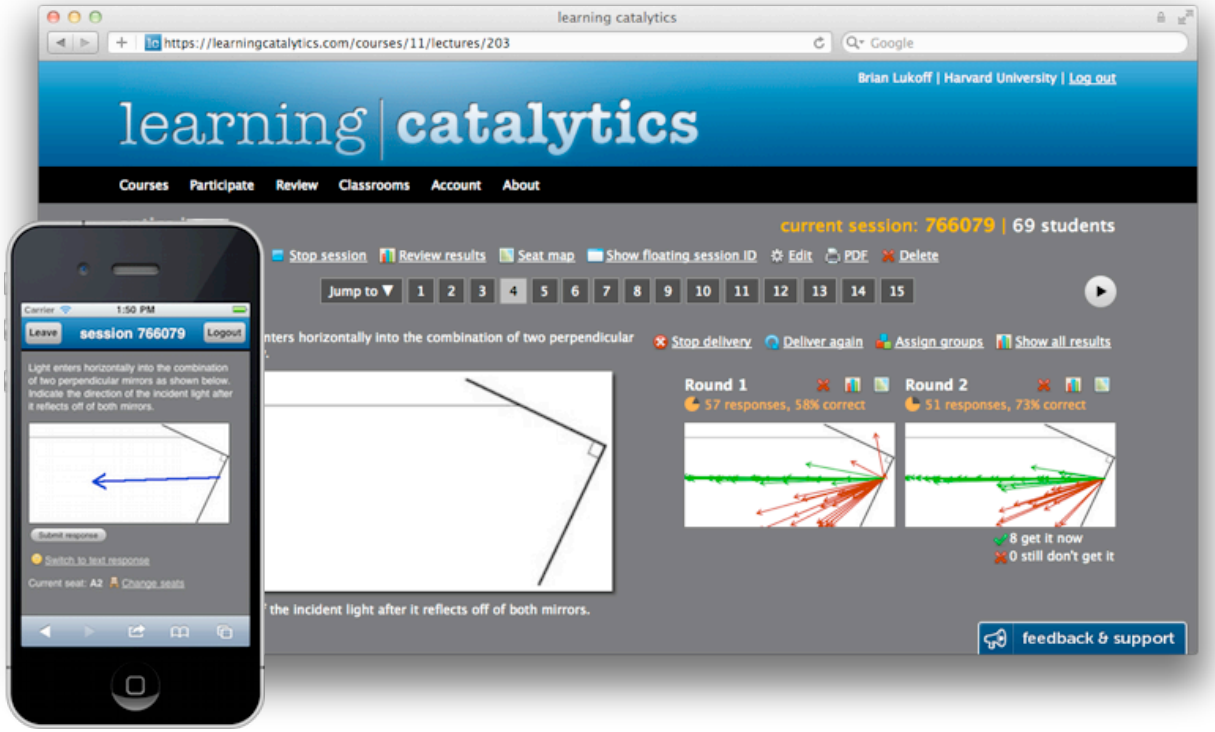


Learning Catalytics (learningcatalytics.com)

Cloud-based technology - students "BYOD"

Piloted for the first time in Spring 2011

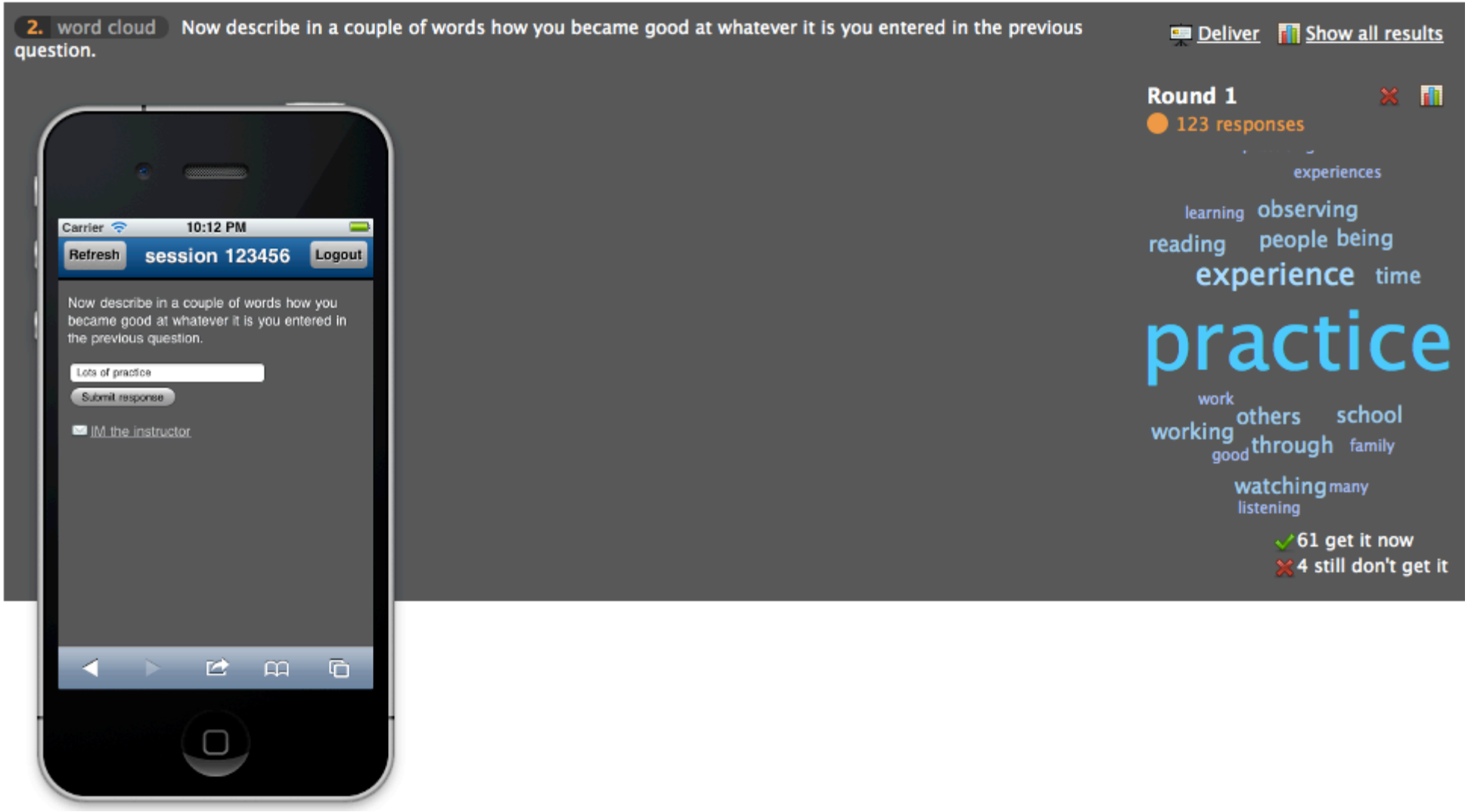
Now used both in K-12 and higher education



Learning Catalytics (learningcatalytics.com)

Not restricted to multiple-choice questions

Learning Catalytics (learningcatalytics.com)



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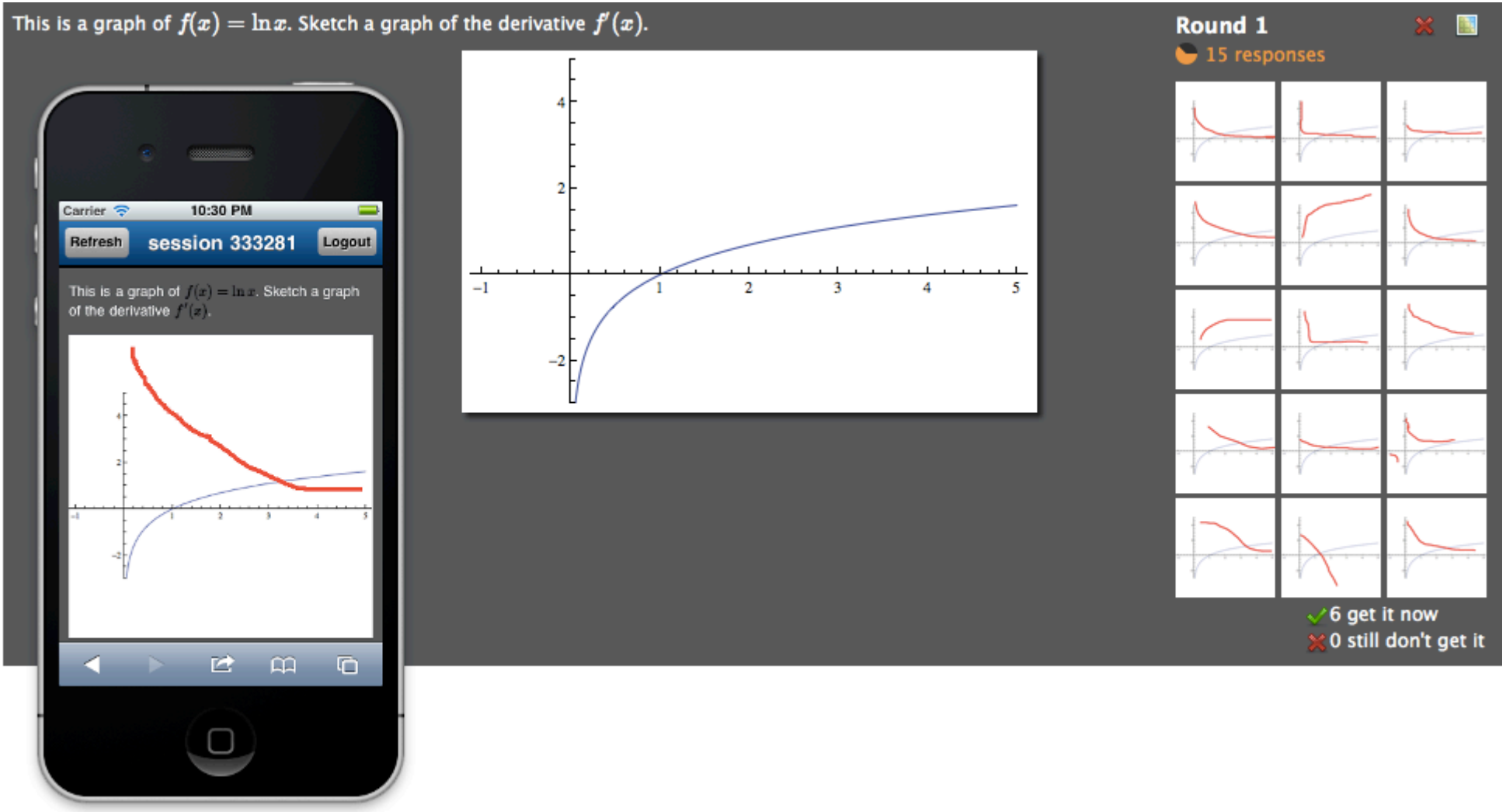
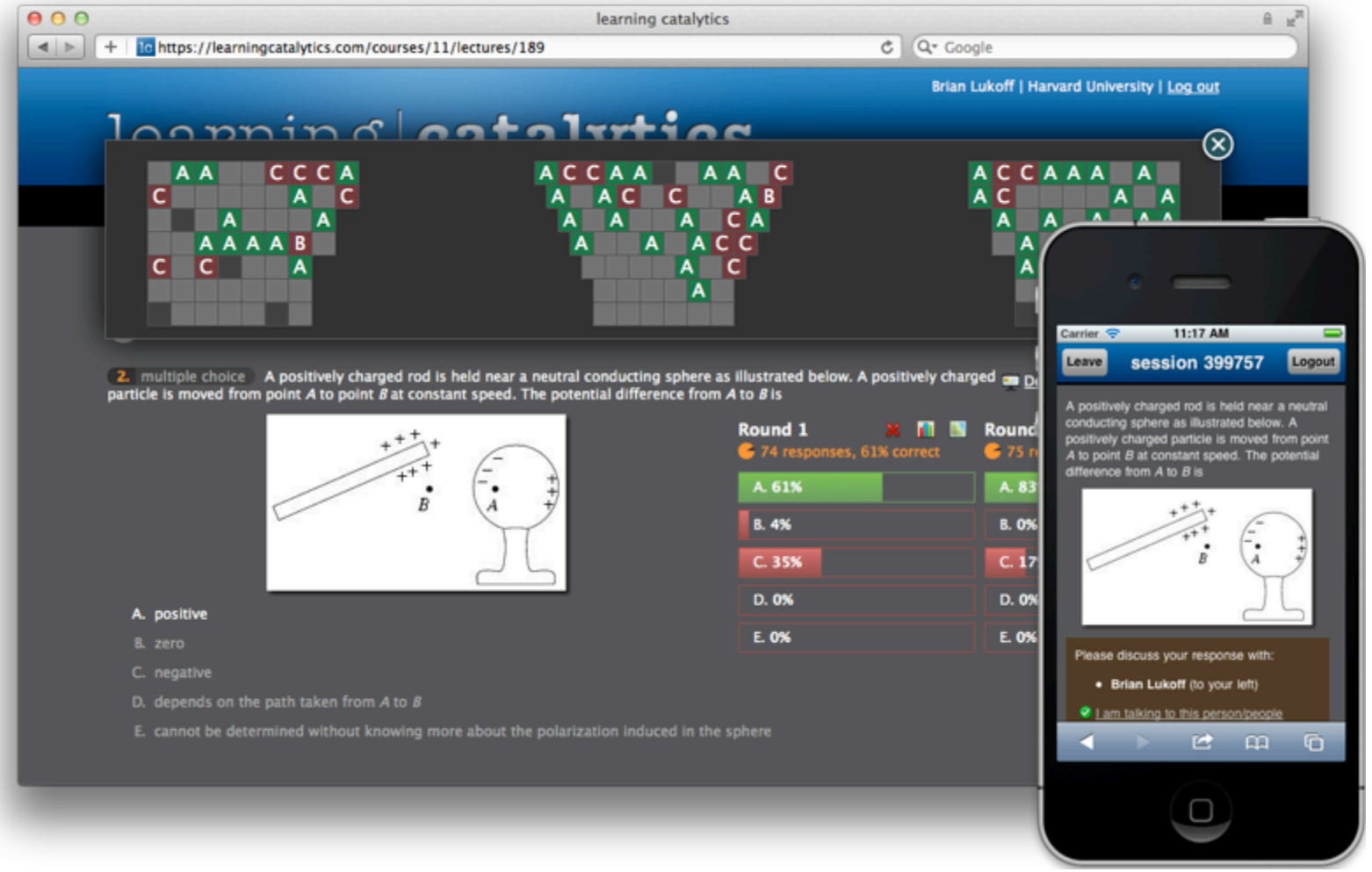


Learning Catalytics (learningcatalytics.com)

Use real-time analytics
to improve discussion productivity

Learning Catalytics (learningcatalytics.com)



Demo

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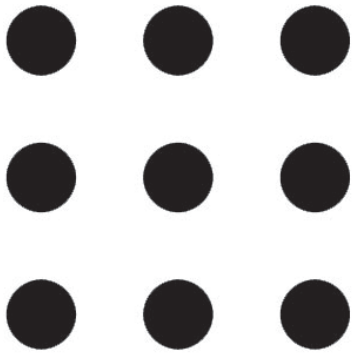
Click “I have a signup code”

Enter your name, email address, and create a password; use the signup code DEMO

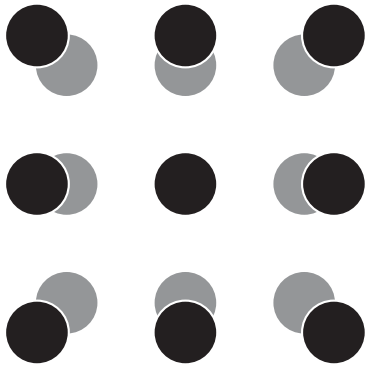
Demo

Thermal Expansion

Demo

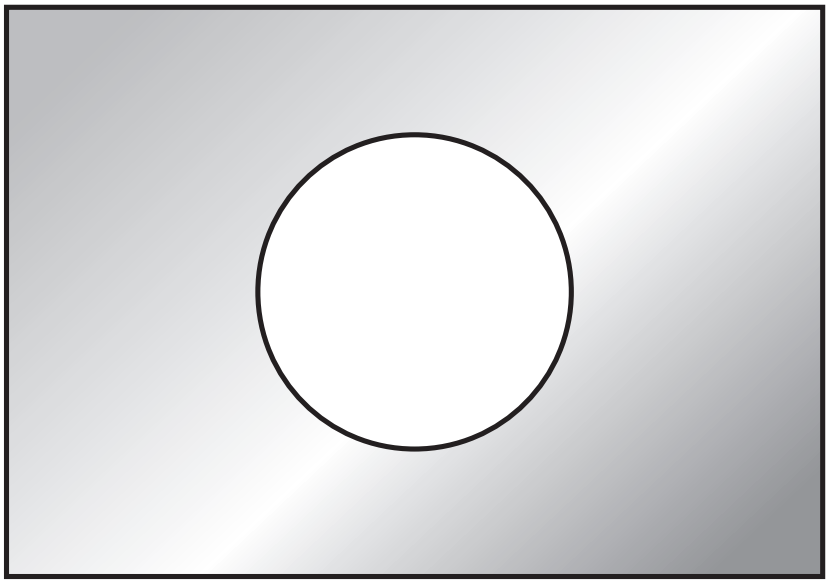


Demo



Demo

Consider a metal plate with a circular hole in it.



When the plate is uniformly heated,
the diameter of the hole

A. increases.
B. stays the same.
C. decreases.

Demo

Systematic Moral Analysis

Gert's new 10 commandments

1. Do not kill.
2. Do not cause pain.
3. Do not disable.
4. Do not deprive of freedom.
5. Do not deprive of pleasure.
6. Do not deceive.
7. Keep your promises.
8. Do not cheat.
9. Obey the law.
10. Do your duty. (i.e. what is required by your job, social role of special circumstances.)

Demo

Heinz's wife was near death, and her only hope was a drug that had been discovered by a pharmacist who was selling it for an exorbitant price. The drug cost $20,000 to make, and the pharmacist was selling it for $200,000. Heinz could only raise $50,000 and insurance wouldn't make up the difference. He offered what he had to the pharmacist, and when his offer was rejected, Heinz said he would pay the rest later. Still the pharmacist refused. In desperation, Heinz broke into the store and stole the drug.

Should Heinz have broken into the store to steal the drug for his wife?

A. Yes
B. No
C. I am not sure

4 Resources

Peer Instruction Network

Connect. Share. Learn.

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