## **Questions that Create Connections:**

6 Tips for Fostering Deep Learning in Person and Online

Edna Ross, Ph.D. Professor, Department of Psychological & Brain Sciences University of Louisville



### Student engagement anywhere.







# Take and Track Attendance

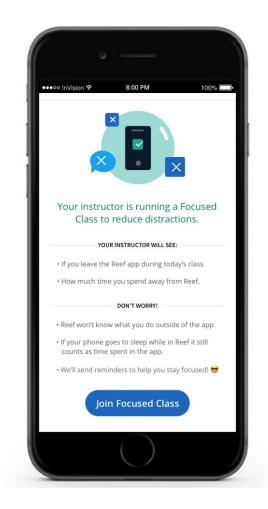


- → Must attend class
- → Must be focused

#### Focus

Deter multitasking on mobile devices.

- Reduce distractions & improve student engagement
- Provide an option for instructors who are concerned about distractions
- Promote student self-regulation behaviors
- Students can join the course via mobile or web
- Monitors whether students exit iClicker and for how long/how many times
- Push notifications to come back to the app during class



## Ask Opening Questions



→ Start class with a question that activates previous knowledge

→ Students answer orally or via a student response system





Allows students to make a simple selection to answer a question.

- · Multiple Choice A-E
- · Yes/No
- · True/False
- Survey
- · Ice Breaker

- Word Cloud
- Essay
- · Multiple Choice (A-Z)

**Short Answer** 

for a freeform input.

Allows students the ability

- $\cdot \, \mathsf{Matching}$
- · Ranking Order



Start Class



Allows students to submit multiple answers to a question through a simple selection.

- · Multiple Choice A-E
- Survey
- · Ice Breaker



#### Numeric

Students input numeric values to answer questions.

- · Numeric Questions
- · Scientific Notation
- Rating



#### Target

Students tap on an image to answer different types of questions.

- Anatomy
- Graphs and Charts
- · Scale
- $\cdot$  Select on a Map



#### Exit Poll

Get feedback from students at the end of class.

- · Level of Understanding
- · Muddiest Point



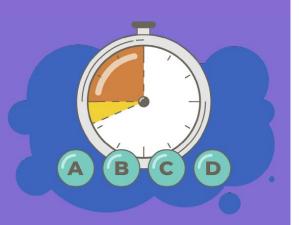


**End Class** 

#### Opening Question (short answer)

In one word, what is the difference between negative reinforcement and punishment?

# **3**"Reset the Clock" with Polling Questions



- → Ask questions every **7-10 minutes**
- → Use questions that support content "chunking"
- → Give points for participation (small: ~5-10% of grade)

#### **Numeric Question**

In what year was the first psychology lab established?

# Use the Socratic Method



- → Pose open-ended questions
  - → Who, what, where, when, why, how???

→ Ask students to discuss the results

→ Use as anchors for small group breakouts

### The Power of Scientific Thinking: \*Pseudoscience\*\*

**Pseudoscience: The Warning Signs:** 

### Choose one strategy from the list below that is evident or implied in the commercial

- A. Strategy 1: Testimonials rather than scientific evidence
- B. Strategy 2: "Sciencey" presentation without scientific substance
- C. Strategy 3: Combining established scientific knowledge with unfounded claims
- D. Strategy 4: Confirmation bias
- E. Strategy 5: Shifting the burden of proof

### 5 Create On-screen "Action"



- → Use a 'digital pencil' or videos to illustrate concepts while speaking
- → Move beyond static, text-heavy slides
- → Include 'checkpoint' questions at the end of your pre-recorded lecture

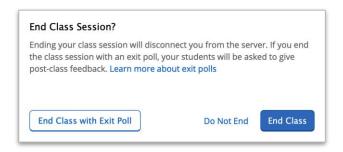
# Ask Closing Questions



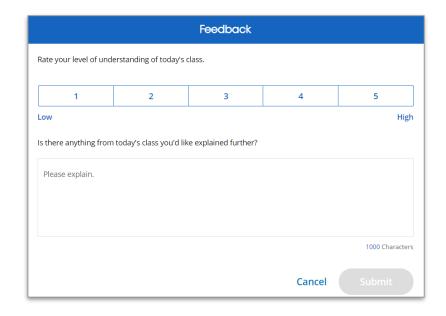
- → Finalize the class session with a question and/or an Exit Poll (ie: muddiest point)
- → Assign participation points for answering
- → Review the **summary** of student responses
- → Use discussion boards/announcements

#### **Exit Polling**

#### Gain post-lecture insight into student understanding.

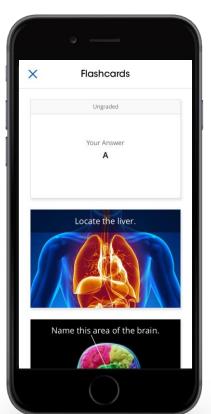


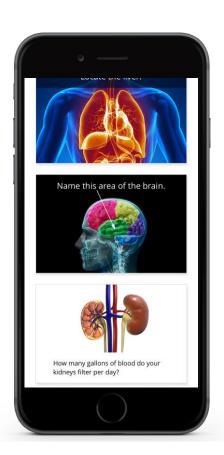
Identify gaps in student understanding to direct your instruction and maximize class time.



#### Instant Virtual Study Guide

- Student app captures all questions for students to review.
- Students can turn any question into a flashcard or practice test.





### Q&A

edna.ross@louisville.edu