"iclicker integration: A strategy to enhance large class active learning"

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Which type of flower would you prefer to see on this PowerPoint presentation?

A. Rose
B. Daisy
C. Daffodil
D. Sunflower
E. B and D
Large class sizes present challenges to teaching and learning

Hiding in plain sight

Passive learning

Distractions
An engaged student can be an active learner even in a large group.
Large class challenges

- One-way communication
- Limited time
- Fear of participation
- Few participate regularly
  - Those who do respond may not be typical
  - Quiet students
- Bad behaviors
  - Falling asleep
  - Talking
  - Computers for non-class activities
- High stakes assessments are common
Which of the following best reflects your general thoughts about PowerPoint use for large class teaching and learning?

A. An effective teaching tool  
B. Generally overused  
C. A great way to outline main points  
D. Other
Strategies to engage large groups in active learning: *Examples*

- Questions
- Problem/case-based learning
- Buzz groups
- 1 minute paper
- Note check
  
  *Take a few minutes to compare notes with your neighbor, summarize*

- Open-ended question
- Think-pair-share
- Focused listening
  
  *Take a piece of paper and list as many characteristics of XYZ as you can...*

- Brainstorm
- Come up with one question and try to stump your partner with it
- Summarize the most important point of today's lecture
- The *flipped* classroom
Suggested strategies to enhance iclicker use

• Plan a balance of content integration and application of the integration
• Consider using a unique plain background for iclicker questions to signal time to respond
Student response systems: Clickers

“The research to date seems to suggest it is how the instructor makes use of the clickers, rather than the simple adoption of clickers themselves, that determines their pedagogical effectiveness. Exploring the Pedagogical Effectiveness of Clickers.”

Iclicker basics

- All students participate!
- Responses analyzed efficiently
- Instructor responds immediately
- Anonymous responses are more honest and better represent class
- Ongoing low risk assessments are possible
- Attendance and comprehension are recorded
Iclicker basics

- You are the creator of your own questions
- They are presented within your Powerpoint
  - I have two copies of each class Powerpoint
    - One for students
    - One with the iclicker questions that I show in class
- The iclicker system stores your questions and student responses
- You can grade your class participation and import it into D2L
Choices

Iclicker
- Less expensive
- 3 batteries
- Numeric voting only

Iclicker 2
- More expensive
- Can be used with regular base units
- LCD Screen
- Confirmation of votes
- 2 batteries
- Numeric and alphanumeric options
## Participation vs. performance *(or both)*

### Participation Points
- Easily document attendance
- Rewards iclicker participation
- Can form a portion of the course grade
- Consider dropping 1-2 lowest attendance scores

### Performance Points
- Can be used to test preparation for class
- Rewards iclicker participation
- Can form a portion of the course grade
- Can lead to unnecessary anxiety if the stakes are a grade
Questions

PLANNING

• Each question can take 3-5 minutes of class time
• Consider how long you want to give students to answer
• For a 75 min class about 5 questions seems optimal
• May use NCLEX style questions

BASE ON LEARNING OUTCOMES

• Stimulate discussion
• Stimulate questions
• Clarify fine points of content
• Test preparation/course review
Examples of types of questions based on various learning outcomes

- Recognition/Recall
- Assessment of preparation
  - Assigned readings
- Assessment of baseline knowledge
- Assessment of understanding of new content and/or terms

- Feedback for instructor
  - Pace of class to fast or too slow?
- Apply knowledge from prior class sessions
  - Scaffold learning
- Apply new content and/or terminology immediately
- Survey questions
  - Student attitudes before or after lecture
  - Student attitudes in response to a video clip
Honestly, what do you think about iclickers thus far?

A. I am still interested in learning more
B. I am clearly no longer interested
C. I have not decided yet
Challenges

Hardware
- “Forgot iclicker”
- “iclicker not functional”
- “batteries died”

Students
- Potential for cheating
- don’t have copies of iclicker questions
- want to know the correct answers
- Anxiety and emails:
  - Performance points
  - Attendance points
  - All of the above
On the previous slide the image was which of the following?

A. A cartoon character
B. A human female
C. A human male
D. None of the above
ANSWER
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Suggested solutions: Advice from the trenches

- Use review books as resources for questions
- The iclicker works from anywhere in the room so you can easily move around!
- Make up questions that fit your content
- Don’t be afraid to ask basic questions
- Occasionally ask a particularly challenging question
- Grade participation once per week
- Use a series of questions for a class review session
Suggested solutions: Advice from the trenches

- Provide the answer clearly on a duplicate slides
- Drop 1-2 lowest attendance scores
- Have spare batteries available
- Post iclicker-Powerpoint with answers at the end of class
- Carefully consider the need to use performance versus participation points
You can ask on the fly questions!
Hardware
What is the likelihood of you adopting iclicker technology in the future?

A. Definitely
B. Very likely
C. Neutral or unsure
D. Not very likely
E. Never
In summary: the use of iclickers can improve large class:

- Engagement
- Attentiveness
- Atmosphere
- Attitude

Offer opportunities for:

- Assessment
- Attendance documentation
- Student feedback on teaching and learning
Questions?