

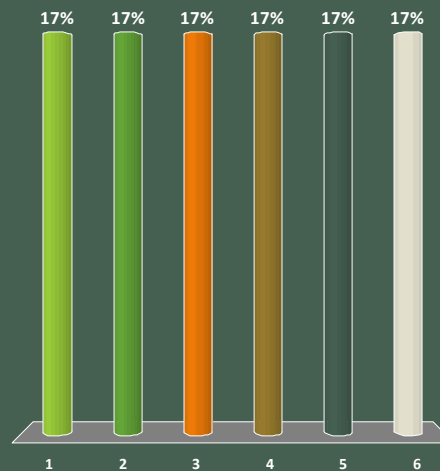
Polls apart? Using clickers to make learning visible!



Debbie Carter, Paul Foxall and Danielle Hinton

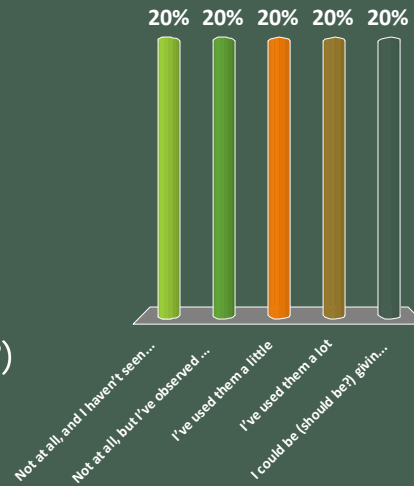
Which college are you from?

1. CAL
2. CoSS
3. EPS
4. LES
5. MDS
6. Other



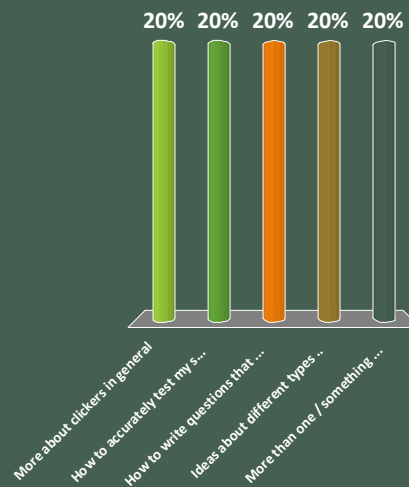
Have you used "clickers before?"

- A. Not at all, and I haven't seen them used
- B. Not at all, but I've observed their use somewhat
- C. I've used them a little
- D. I've used them a lot
- E. I could be (should be?) giving this workshop



What are you here to learn about?

- A. More about clickers in general
- B. How to accurately test my students' understanding
- C. How to write questions that get students thinking or talking
- D. Ideas about different types of questions
- E. More than one / something else



Think – Pair – Share

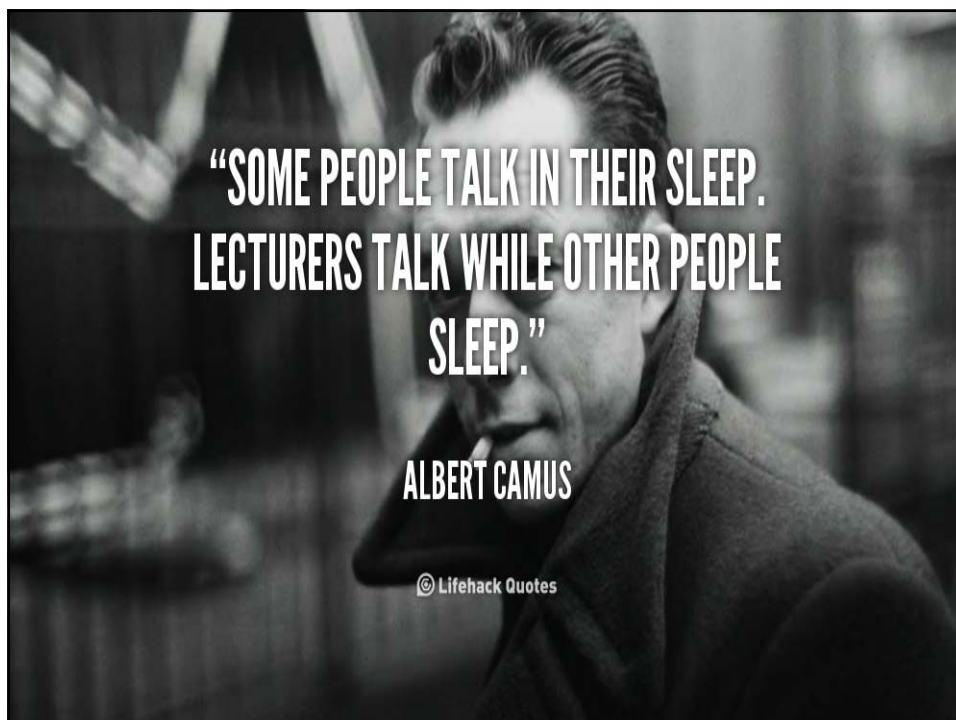
- By yourself think about your teaching experiences for 60 seconds
- What are **two common questions you might ask yourself about your students?**
- Now turn to your neighbours and share your thoughts for 2 mins
- Common experiences / differences?

Common Questions...

- Have students engaged with materials before class?
- Are student paying attention?
- Do students recognise and grasp concepts?
- Are students thinking?
- Do student remember the important facts?
- Can students work in a group?
- What do students say about the pace and interest of the lecture?
- How do I engage a mixed group (abilities and international students)

Clickers are tools that can help...

- Engage students in peer & active learning (including the flipped classroom)
- Encourage students to take risk, commit to an answer and think critically
- Support experiential learning / feedback loop
- Identify strengths and weakness
- Encouraging fun
- Support agile teaching (focusing on student not teacher needs)
- Promote development of "employability" skills



The Lecture Environment

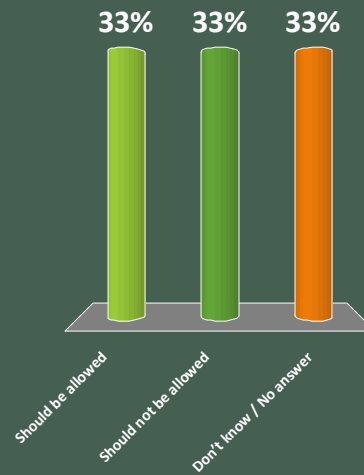


A question...

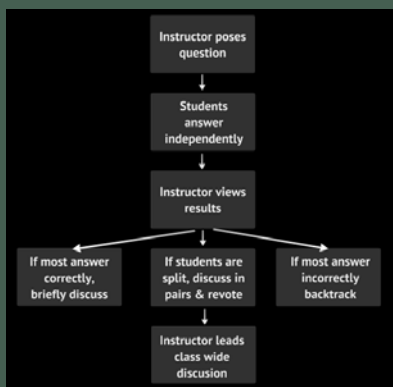
- If a person has a disease that will ultimately destroy their mind or body and they want to take their own life, should a doctor be allowed to assist the person in taking their own life, or not?

Should a doctor be allowed to assist a person in taking their own life, or not?

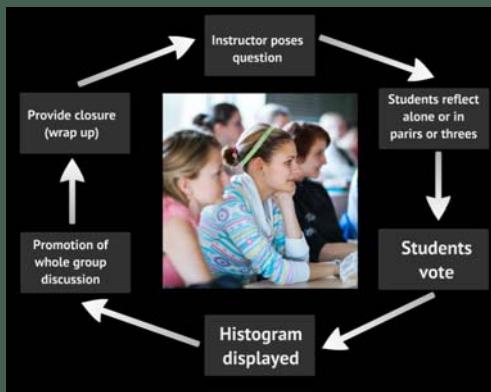
- A. Should be allowed
- B. Should not be allowed
- C. Don't know / No answer



Active Learning Frameworks



Bruff Framework (2012)



Beatty Framework (2010)

Think – Pair – Share



- Let's explore **first year student's experiences and transition** (new to a discipline or level of study)
- Sketch in 60 seconds - group size, level, topic, gut feeling about effectiveness
- Now turn to your neighbours and share your thoughts for 2 mins
- Common experiences / differences?

Supporting First Year Experience and Transition

- Often in "large" and diverse groups
 - Scary and bewildered?
 - Passive?
 - Friendly?
- Community doesn't happen spontaneously
- Information overload

Supporting First Year Experience and Transition

- Mutual community awareness building (demographics, perceptions & expectations)
- Evaluation of students' understanding of concepts
- Basis for obtaining students' views on topics in order to start discussions
- Increase discussion on sensitive topics (ethical, moral or legal issues)

Other situations

- Large group (100 – 450) lectures
- Large group seminars (25 – 50)
- Mixed ability seminars
- Mix of home and international students
- Exam preparation
- Weekly feedback mechanism
- Your examples...

Consider Before Creating a Question...

- What student learning goals do I have for the question?
- What do I hope to learn about my students by asking this question?
- What will my students learn about each other when they see the results of this question?
- ➔ ○ How might this question be used to engage students with course content in small-group or classwide discussions or by creating a time for telling?
- What distribution of responses do I expect from my students?
- What might I do if the actual distribution turns out very differently?

Designing Questions



- Drawing out student's background knowledge or beliefs
- Making students aware of their own and others' perceptions & interpretations
- Discovering confusions, misconceptions & knowledge gaps
- Distinguishing similar concepts
- Realising connections or similarities
- Elaborating understanding of a concept
- Exploring implications of an idea in a new or extended context

Types of Clicker Questions

- Recall
- Conceptual understanding
- Application
- Critical Thinking
- Student Perspective
- Confidence level
- Monitoring
- Classroom experiment

Selling clickers to students

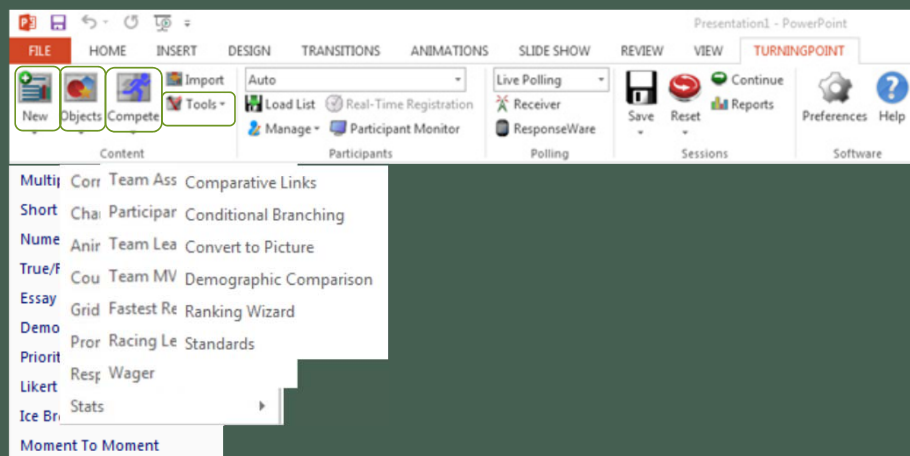
- Setting expectations is key
- Explain
 - why you are using clickers
 - what you want to achieve
- Be confident about their use (practise)
- Have a backup plan

TurningPoint

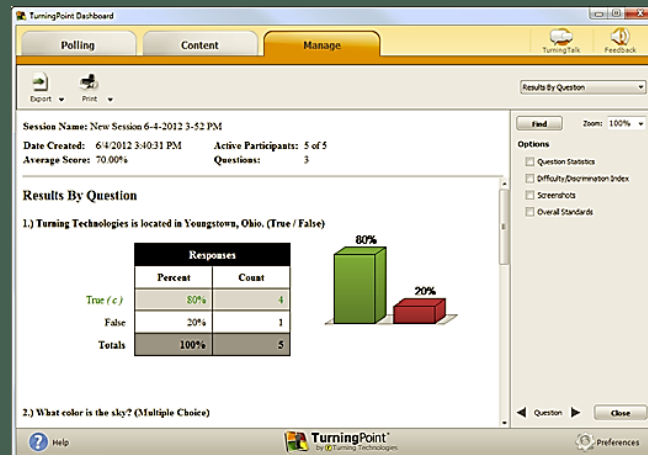
- Software
 - *TurningPoint* is used in conjunction with PowerPoint to create interactive presentations
 - The **free** software is installed onto PCs (go to: <http://www.turningtechnologies.co.uk/>)
 - Mobile apps download from Apple iTunes and Google Play
- Mobile devices: smartphones and tablets using ResponseWare app
- Hardware
 - Clickers and USB receiver dongle
(NB: Special hardware is not required to develop the interactive presentations)



Nuts and Bolts



Reports



BYOD Polling

- Bring Your Own Device
 - Allows students to polling using their own smartphones and tablets



Practitioners' Forum

- ResponseWare Workshop
 - Hands-on demonstration
- 8th January 2015
 - Business School



Questions?



Further information

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- training course:
 - <https://intranet.birmingham.ac.uk/as/libraryservices/library/skills/digitaltechnologyskills/courses/turningpoint.aspx>
- **Polling Users Group**
 - Share best practice over coffee

