

Getting Started with Clickers....

Why use Clickers?

- Figure out the pulse of the class especially in large courses
- Increase participation from a range of students
- Provide low-stakes assessment of learning before the real quiz or test
- Improve engagement after 15-20 minutes of lecture
- Test the waters- my class has some sensitive topics
- Spark discussion
- Promote deeper learning by having students challenge each other

Possible Strategies

- Start of each lecture to check for reading or prior knowledge
- Check for prevalence of particular misconceptions
- After 15-20 minutes of lecture, as an interactive activity
- Ask a concept question- Vote- use Peer learning (turn to your neighbor; convince you are right/defend position)- Vote again- Lecture to clarify the correct position or group discussion of the merits/limitations of the last standing answers (as per Mazur's peer instruction method)
- To facilitate an interrupted case at the end of a unit
- End of each lecture to test for knowledge in a low-stakes quiz
- End of each lecture period, to recap, summarize, or informally test for comprehension

Tip: Clarify how many Points will be associated with clicker use

- Typically clicker participation accounts for 5% of the overall grade
- Could be a portion of overall participation
- Some faculty provide .8 point for clicking and .2 point if they get it right

Tip: Remember Accessibility Concerns, and use a different method for timed quizzing

- We strongly recommend the use of moodle or another way to distribute timed quizzes. Many of our students require extended time for accessibility reasons. Our campus pilot data across many courses demonstrated anxiety was high for students who were asked to use clickers for quizzing, even when not an accessibility concern, diminishing their learning value.

Tip: Plan for Technology Glitches

- If software fails, cancel clicker points for that day
- Form a regular habit to back up clicker data

For more info... organized by field, visit Derek Bruff's (Center for Teaching at Vanderbilt) page

- cft.vanderbilt.edu/docs/classroom-response-system-clickers-bibliography/

Tip: Create good questions that will spark deeper learning or discussion. This takes time.

An example question	Better seasons example
<p>What causes the seasons?</p> <p>A. The change in the earth's distance from the sun during the year</p> <p>B. The tilt of the earth's axis</p> <p>C. Changes in the sun's brightness</p> <p>D. Changes in clouds</p> <p>E. None of the above</p> <p>Can we make a better question on the SAME topic? Yes...</p>	<p>What would happen to the seasons if the earth's orbit around the sun was made a perfect circle (but nothing else changed)?</p> <p>A. There would be no seasons</p> <p>B. The seasons would remain pretty much as they are today</p> <p>C. Winter to spring would differ much less than now</p> <p>D. Winter to spring would differ much more than now</p> <p>Much better question. Requires reasoning!</p>

Example: from University of Colorado

Tips: What to include in your Syllabus

1. Tell students **why** you are using clickers...otherwise students may assume no good reason.
 - Each week you can expect a quiz on the assigned readings collected with clickers
 - Because this class deals with personal topics and conversation is important, I will use the clickers to solicit your opinions to start the conversation.
 - There are many important concepts in this course that everyone will need to know. Clickers will help me to see where the class is as a whole before moving on.
 - We will use clickers to check for understanding and encourage participation. You will debate your answers with your peers because this contributes to the learning process.
2. Describe the **penalty** for forgetting one's clicker and **points associated** with using the clickers
 - It is your responsibility to bring your clicker to every class. If you forget to bring your Clicker to class, you will receive 0 points for Clicker questions that day. No written answers to Clicker questions will be accepted.
 - You'll receive one point for each clicker participation. If you get a quiz question right, you earn an extra two points. There will never be more than three quiz questions in a single class session.
 - We need to learn how to use this software before I start recording grades. So I'm going to throw out the scores for the first two weeks. At the end of the semester, I'll also throw out your three poorest scores. That should address those who also miss class on a day we use clickers.
3. Convey a clear **policy** about clicker misuse and **cheating**
 - Entering responses for another student in the class using their Clicker is a violation of the Honor Code and is considered cheating. Both the absent student and the student caught "clicking" for the absent student will be reported to the Dean of the College and will receive 0 Clicker points for that lesson.
 - Inappropriate use of i>Clicker, such as having another student enter your i>Clicker responses for you, will result in forfeiture of all your Clicker points for the semester.

Adapted from Kent State U., Univ of Colorado (Prof Morrison), Univ of Tennessee (Prof Smith), Univ of Florida (Prof Wooland)