

Tips for Using Clickers in the Classroom

Classroom performance systems or clickers, as they're commonly known, can help engage students, encourage active interaction, and contribute to student learning.

What are Clickers?

- Clickers are classroom communication systems designed to support communication and interaction in classrooms.
- Clickers are used like this:
 1. Instructor presents a question or problem to the class.
 2. Students enter their responses into a handheld device.
 3. The system aggregates and summarizes student responses for the instructor and public display.

Why Use Clickers?

- Clickers can be used to make lectures more interactive.
- Students are more actively engaged when clickers are used.
- Students maintain attention longer with clickers.
- Clickers can facilitate collaboration among students.
- Participation increases as all students, not just a vocal minority, have the opportunity to express their thoughts and opinions.
- When students have to respond to questions, they do more mental processing than when questions are asked rhetorically or answered by only a handful of other students.

How Can Clickers Be Used?

- *Background knowledge probes.* At the beginning of class or as a topic is introduced, clickers can be used to survey students' knowledge, opinions, or attitudes towards a topic.
- *Formative assessment.* Clickers can be used to informally check on students' learning. For example, after content has been presented through lecture or reading assignments, students could be asked application questions or to choose the correct answer to a problem. This feedback can be useful not only to students but also to instructors as it provides information that can be used to fine tune instruction.
- *Discussion launching.* Clickers can be used to launch small group discussions. Students can discuss questions in a group, and then respond as a group to questions.
- *Peer assessment.* Students can use clickers to give feedback to other students about presentations or other public student work.
- *Demonstrations/experiments.* Clickers can be used to demonstrate a variety of scientific phenomena or to have students predict results of experimental manipulations.
- *Attendance.* Clickers can provide a record of student attendance.
- *Study guides or practice tests.* Clickers can be used to review material or provide practice questions for students to help prepare them for tests.
- *Quizzes or tests.* It's possible to record students responses, so clickers can be used for graded quizzes and tests.

What Are Possible Concerns With Using Clickers?

- *Need to redesign instruction.* The use of clickers requires instructors to rethink their instruction to leverage the potential advantages of using clickers. They may start with just minor changes, but major pedagogical changes also may be implemented.
- *Less control of class.* Student responses are not always predictable and instructors need to be prepared when students' interests or learning needs are different than what the instructor anticipated. This may mean changing the lesson plan during class.
- *Time requirements.* Using clickers, especially at first, takes additional class time.
- *Technology requirements.* Instructors need to learn how to use the technology, be prepared to set it up in class, and know how to deal with technical difficulties that arise.
- *Expense.* Classroom performance systems vary in cost, and determining who will pay for them may be an issue.

How Might Students Respond to Clickers?

- Students most often enjoy using clickers once they become used to them.
- Students generally think that using clickers contributes to their understanding. They appreciate the feedback they get about their own understanding of material.
- Students appreciate the anonymity provided by the use of clickers.
- If students are accustomed to passive lectures they initially may be uncomfortable with the more active format required by the use of clickers.
- Students may perceive even formative assessment with clickers as tests, so may have concerns about that.
- Students respond to clickers most positively when they are used to engage students interactively, not just for quick feedback or attendance taking.

Remember...

- *Pedagogy first, technology second.* Use clickers to help students reach instructional goals for your course, don't let technology become the main focus.

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