

# Tips for Teaching with Clickers

Using a classroom response system

## Overview

Whether you are considering using clickers (a.k.a. polling, classroom response system) or have already decided to use them, these are some tips on how to use them effectively.

## Benefits of Using Clickers

- Increase interaction and engagement during lecture.
- Encourage students to be better prepared for class.
- Provides feedback for you and your students on learning and attitudes.
- Encourages interaction amongst students.
- Increases attendance.
- Assesses student learning.

## Ways to Use Clickers

### Active Participation

- Gain attention by highlighting a misconception or recalling prior knowledge.
- Start or focus discussions.
- Collect votes after a debate.
- Ask to see if students can apply concept to new scenario.

### Peer Instruction

- Ask a question >> encourage discussion with peers >> re-poll students.
- Use questions that encourage discussion and debate of the correct answer.

### Opinion Surveys

- Solicit views on sensitive topic (Use anonymous mode).
- Solicit feedback on the course activities.

### Student Information

- Collect anonymous demographic information.
- Solicit opinions and attitudes.
- Probe pre-existing level of understanding.

### Assessment

- Beginning of class: assess student preparation regarding readings or homework.
- During class: assess understanding or misunderstandings of material in lectures.
- End of class: assess comprehension of lecture material.
- Offer practice test questions or low stakes quizzes.

### Practice problems

- For math, physics and other subjects requiring computation. ask students to solve problems to answer questions.
- Ask students to estimate and answer or predict an outcome based on real world examples and data.

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### Related Guides

InterWrite PRS Software: The Basics  
InterWrite PRS Software: Powerpoint

## Quick Guide

## Tips for Writing Good Questions

- Address a specific skill or learning goal.
- Minimize questions that test for facts.
- Identify student misconceptions and include them as answers.
- Ask questions that contain common errors or distinguish between related concepts.
- Include an "i don't know" response to prevent guessing.
- Ask questions without a single correct to prompt debate.
- Provide a graph, data, or image and match it with best interpretation or description.

## Tips for Success

- Make time in class for clickers. You WILL have to rethink the structure of your lecture.
- Ask 2-3 questions/class.
- Be familiar with the technology before class.
- Have a backup plan, if they don't work.
- Be clear about your reason for using clickers and let the students know.
- Emphasize credit for participation not for whether correct or incorrect so as to minimize anxiety.
- If using for attendance, allow some missed classes to account for technology malfunction.
- Record your questions, student responses, and if they were effective or not.

Classroom Decisions:  
Tracking and grading responses

You can choose whether you want to track responses or not. Some instructors use clickers for attendance while others use them anonymously. Students may not be motivated to buy clickers unless responses are tracked.

To minimize anxiety allow students a certain number of missed classes.

Minimize cheating by not making quizzes "high stakes."

## Interwrite PRS system

- ITS supports the Interwrite RF Personal Response System (PRS) software and hardware. Contact ITS to make sure the PRS receiver and software are in your classroom.
- IC bookstore sells the clickers for ~\$47 and buys them back for ~\$23.50. Order clickers as you would a textbook.



## Additional Reading

[Clickers in the Large Classroom: Current Research and Best-Practice Tips](#) (2007)  
Jane E. Caldwell CBE Life Sci Educ 6(1): 9-20

[Clickers in the Classroom: An Active Learning Approach](#) (2007)  
Margie Martyn. Educause Quarterly 30(2)

## For More Information

For more information on Interwrite Personal Response System (PRS) go to the ITS Support Site at <https://www.ithaca.edu/computing/support/software>. For additional help, contact the ITS Helpdesk at [helpdesk@ithaca.edu](mailto:helpdesk@ithaca.edu) or 4-3282.

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