

# Writing Good Clicker Questions

## Consider question

- Mechanics
- Depth
- Goals

## The best clicker questions ....

- Are often focused on conceptual understanding
- Deal with important ideas in class
- Have common student mistakes (consider answers from past exams or quizzes) as the wrong answers.
- Result in a lot of discussion and debate among the students.
- Require analysis and reasoning (not simple memorization).

	<b>Poor question</b>	<b>Better question</b>
<b>CONTENT</b>	Trivial detail	Important and central idea
<b>DIFFICULTY</b>	Tests memorized fact. Yes/no questions. Plugging in numbers.	Interesting and challenging (but not overly difficult). Qualitative.
<b>DISTRACTORS</b>	Wrong answers are easily recognized among alternatives	Tempting distractors, based on what students often struggle with in material. "Not enough information" is often good to include.
<b>CLARITY</b>	Confusing, unclear, uses jargon.	Clear and conversational.

# **Different Goals of Clicker Questions**

(credit to Ian Beatty, U. Mass-Amherst)

## **1. Setting up instruction**

- Assess prior knowledge
- Provide feedback to teacher about student ideas
- Provoke thinking about something new
- Stimulate discussion
- Predict and show
- Induce cognitive conflict
- Give students a voice (i.e., survey on their opinions/preferences)

## **2. Developing knowledge**

- Elicit misconception
- Exercise cognitive skill
- Build conceptual structure
- Drive assimilation
- Provide feedback to students about their own learning
- Provide feedback to instructors about student learning
- Focus students on the key ideas
- Improve motivation (keep student confidence and interest)

## **3. Assess learning**

- Status check / exit poll
- Find limits of knowledge
- Demonstrate success
- Review a topic
- Increase student accountability (e.g., reading quiz)