

Best Practices: Audience Response System

Audience response systems have given students a pedagogically powerful blend of intimacy and anonymity that can move them from passive to active learning. UCFCOM has invested in Turning Point clicker and laptop technology that allows faculty to engage students. While clicker questions are often viewed as a break used in a traditional lecture, questions often go beyond and serve as formative assessment and discussion tools.

Current Best Practices

Think-pair-share

The think-pair-share method encourages students to make a decision by thinking it through, pairing with a classmate to discuss their decision or answer, then deciding as a pair which answer to present to the class. The 30 second think mode allows the student to evaluate a question on their own without being interrupted by a classmate's response as is the traditional method of answering a professor's question. Next, in a pair, each student practices saying what they think, in a safe environment. Finally, the pairs respond with their answers and prepare to discuss or argue the correct answer. At this point, students have done a thorough evaluation of a question and should feel comfortable with their answer, even a wrong answer. How do clickers play a role in this strategy? It's extremely helpful to have the pairs simultaneously respond after their discussions in order to gauge the different answers. While the system provides anonymity, the instructor can ask for an explanation for the various answers and provide the opportunity for rich discussion and dissection of the issue.

Making good questions

It's important to decide the purpose of the questions prior to creating your audience response presentation.

- Content questions – basic content questions ask the student to recall information from your presentation or readings. While useful in breaking the monotony of a long session, basic content questions do not engage the student in higher level cognitive thinking.
- Conceptual questions – similar to questions on summative examinations, conceptual questions seek evidence of understanding, application and critical thinking skills.

Content and conceptual questions can and should be used to determine the student's understanding of material and should inform the professor's instructional activities. If 80% of the class has a grasp of the concepts, the lecture should shift to an application or discussion exercise to expand the students understanding.

Assessing metacognition and confidence

A number of pioneers in clicker use decided to marry self-assessments of confidence levels with decisions about right or wrong answers to encourage student learning. In one example (where clicker responses are graded), an instructor gave five points for a correct answer in which a student indicated

high confidence. An incorrect answer that a student had expressed high confidence received no points. An incorrect answer in which a student indicated low confidence would receive two points. This process encouraged students to respond honestly and allowed them to evaluate their individual learning strengths and weaknesses. If a student gave the right answer but wasn't confident in their response, they would have a metacognitive moment that would force them to evaluate why they weren't comfortable with their response.

The use of audience response systems expand the way we teach and learn. Research and the expanded use of audience response technology in the classroom will warrant multiple updates to this resource. Please let us know how you've used the technology so we can share it with the UCFCOM learning community!

Additional Audience Response Resources:

1. Bruff, D. (2009). *Teaching with classroom response systems: creating active learning environments*. San Francisco, CA: Jossey-Bass.
2. Caldwell, J. (2007). Clickers in the large classroom: current research and best-practice tips. *CBE Life Sciences Education*, 6 (1), 9-20.
3. Robertson, L. (2000). Twelve tips for using a computerized interactive audience response system. *Medical Teacher*, 22 (3), 237-239.
4. Turning Talk. Turning Talk - A Social Learning Community For Users of Turning Technologies Products and Services posted to <http://www.turning-talk.com>