

Classroom Response System A Classroom Technology

Several university-administered classrooms have recently been equipped with a Classroom Response System (CRS). This document briefly describes the technology, its potential benefits and costs, and provides contact information if you would like to explore its use.

Faculty, especially those who teach large classes, frequently experience frustration surrounding a set of common issues. These often include difficulty...

- ❖ gauging students' comprehension of material from prior lectures and reading assignments
- ❖ monitoring students' ongoing understanding of current material in real-time
- ❖ actively engaging large groups of students during class
- ❖ efficiently delivering in-class quizzes.

If you are troubled by any of these issues, you might want to consider using a Classroom Response System.

What is it?

A Classroom Response System (CRS) is an interactive technology that enables instructors to pose questions and immediately collect responses from an entire class. The system automatically tallies the responses and instantaneously projects the results in a graphical format for the entire class to see.

How does it work?

- Students purchase hand-held, battery-operated remote control transmitters at the bookstore.
- Instructors present multiple-choice questions in PowerPoint (or other presentation software), on the board, or verbally in the context of an in-class demonstration.
- Students submit their responses by pointing their transmitters at wall-mounted receivers that are installed around the classroom.
- Free software (available for the Mac and PC) immediately collects and stores individual student's responses. Collection software will be installed in those classrooms with resident computers. Those rooms without resident machines require instructors to bring a laptop equipped with the necessary software.
- The system tabulates the responses and projects a distribution of the students' answers, in the form of a histogram, for the entire class to see.
- Instructors using resident software to collect student data can easily email the database of responses collected during a classroom session to a personal computer for grading, point assignment of additional analyses.

Some potential benefits of a CRS include the ability to:

- Identify and diagnose students' misconceptions
- Provide immediate feedback to you and to students on the level of current understanding
- Support active student engagement
- Elicit participation from non-participative students
- Monitor and track class attendance, even in large classes
- Encourage punctuality (when used to take attendance at the beginning of a class)
- Facilitate automatic and immediate grading of in-class quizzes

While this technology carries some potential benefits, it also carries some possible costs. Many of these costs are associated with the up-front time required to develop proficiency with the system and the revision or development of materials to support pedagogically sound use of the system.

Some potential costs of a CRS include the:

- Time to learn to use the system and manage its data
- Time to revise and/or develop appropriate questions
- Possibility of technical problems
- Financial costs to students of the remote control transmitter (bookstore price: new-\$33.50, used-\$22.25, buy-back at 40%-50% of purchase price)
- Need for flexibility in the content and quantity of material you cover in a classroom session and thus a potential loss of some predictability and control.

Contact & More Info...

- Office of Technology for Education (OTE): 268-9090
- Hyper-Interactive Teaching Technology website: <http://www.h-itt.com/>

Carnegie Mellon