Expect (and Collect) a Response From Everyone in the Classroom.

Karen Bronshteyn  
_Anoka Technical College, kbronshteyn@anokatech.edu_
EXPECT (AND COLLECT) A RESPONSE FROM EVERYONE IN THE CLASSROOM

Karen Bronshteyn
Anoka Technical College

REVIEWED MATERIAL

Teaching with Classroom Response Systems: Creating Active Learning Environments.
By Derek Bruff
ISBN 9780470288931
220 pages $36
It can be frustrating for a teacher to find out at the end of class that a few students could not follow the lesson’s objective. Those few have essentially wasted tuition money by not speaking up about the points they did not understand. The instructor missed a prime opportunity to adjust instruction to suit the students’ needs, and the students missed the chance to self-assess their comprehension and communicate their needs to the instructor.

Enter a technology, increasingly used by those who can afford it or have their students purchase it, and completely inaccessible to those who can’t or haven’t: the classroom/audience response system or CRS, also known as the “clicker.”

Teaching with Classroom Response Systems (2009) states its intention is to be “a practical guide for instructors interested in teaching with classroom response systems” (Bruff, p. xii). The book goes beyond this intention by providing a comprehensive overview of ways to engage and assess students with clickers, allowing for valuable learning opportunities. It also touches on the selection of a brand of response systems, adoption of a response system, and promotion. While primarily geared toward higher education, many examples are relevant for K-12.

Bruff interviewed over 50 instructors in multiple disciplines in order to present abundant pedagogical examples of clicker usage (Bruff, xiii). Chapter One discusses typical usage of clickers for student engagement: a multiple choice question, a bar graph display of answers, and a second display of answers (after students change their answers). The book provides an overview of the technology behind the clicker, the retail cost, and a literature review of research into their effectiveness.

A common use of clickers—classroom discussion—is addressed at length and provided within the framework of case studies in a half dozen diverse fields. A just-in-time engagement technique, referred to in the literature as “times for telling,” involves posing a multiple-choice question designed to entice students to select a misconception. When students find out their answers were wrong, they commit their full attention to the instructor. Clicker technology also allows for a way to structure the class and to provide fun, game-like interactions.

Chapter Two covers the ability for instructors to engage in up-to-the-minute assessment of student learning by receiving (and recording electronically) student answers to questions posed at intervals. This continual assessment allows for on-the-fly adjustment of instructional technique and content, and allows the instructor to better allocate time to lesson objectives. The literature which Bruff refers to calls this “agile teaching.” Case studies and several
detailed examples for graded assessment using clickers are provided at the end of the chapter.

Although most classroom response systems on the market limit the instructor to multiple choice questions, Bruff provides a lengthy “taxonomy of clicker questions” in Chapter Three. The type of questions include content, recall, conceptual understanding, application (procedural, prediction), critical thinking, process questions (student perspective, confidence level), and even classroom experiment questions.

An instructor won’t want to invest time in the technology for technology’s sake but will balance the pedagogical advantages with the cost effectiveness of time and equipment investments. A type of FAQ of instructional questions comprises Chapter Four, whereas Chapter Five conveys the technical issues with various systems, including tips on learning about the technology and vendor selection. Peer support is of prime value in embarking on the integration of classroom response systems. All is not lost on those who cannot invest in the technology, as low-tech (or alternative tech) options to clickers are also described.

Bruff ends with a detailed chapter on the advantages of clicker usage, including frequent and immediate feedback, and a summative set of 16 “final suggestions” for student engagement. Detailed references and an index complete this helpful work.