



AUBURN
UNIVERSITY

Challenge:

Students during the course struggled to learn both the visual and textual language required for accurate comprehension and application.

Solution:

i>clickers as a responsive system provide easy application of formative assessments of student and instructor performance and are readily customized to multiple types of questions and scenarios.

Benefits:

By applying i>clickers to the course, student attendance can be improved, thus influencing increased student attendance, engagement and overall course grades, with the easy of administration.

I>CLICKER CASE STUDY: DEPARTMENT OF ART, AUBURN UNIVERSITY

Art History helps students understanding art as a scientific and discursive field through active and engaging course lecture

Art History course applies i>clicker response system to acquire knowledge about student performance, while at the same time improving comprehension of topics covered.

Motivation For Using i>clickers

- To increase student participation and discussion in lecture;
- To obtain a formative assessment for students and for myself;
- To improve attendance and timeliness.

Technology Implementation & Usage

Obtaining/Registering i>clickers: Students purchase i>clickers in the university bookstores, where they are available both new and used. i>clickers are sold separately from the course textbooks, and they are a requirement for the class. The publisher of the textbook has bundled a rebate coupon for the clickers with the book.

Taking Responsibility: Students register their clickers in class via the in-class/roll-call registration tool.

Classroom Application: In class, PowerPoint presentations are used every day. Also, use a course Blackboard page for announcements, information posting, and the course grade book.

i>clicker Grading Policy: i>clicker points account for 10% of students' grades. This semester, that meant 40 points. Over the course of the semester, questions are presented worth 51 points, but students could only earn up to 40. The extra questions give students the opportunity to build up their points if they missed any classes or submitted any incorrect answers. If a question is asked that has a correct answer (most of the quizzes), a correct answer was worth 1 point, and a wrong answer merited .25 points for participation. The experience and opinion polling questions did not have right answers, so they are each worth .25 points for participation. Students could also earn .5 points a day if they answered all questions asked—this was their full attendance bonus. If they missed a question because they are late or left early, they could not receive this half-point.

Daily Use/Questions Asked: Use i>clicker in every class period, averaging two to three questions per class. Typically, ask a question in the first five minutes of class, then perhaps one or two questions in the middle of class, and then another question at the end of class. Occasionally, may run out of time and unable to present the last question.

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Joyce de Vries, Department of Art, Auburn University, Auburn

Question Examples: To date, i>clickers are not used for quizzes on reading assignments; questions are instead based on lecture material. i>clickers are used to ask a range of types of questions, all of which are generated without help from the textbook publisher. One way i>clickers are used is to administer quizzes; some of these quizzes focused on definitions of terms and presented multiple-choice answers, while others were visual in nature (show two works of art and ask which one illustrated a term or concept).

Which of these two churches is built with barrel vaults? Which Italian artist influenced the style of this Dutch work?

i>clickers are also used for experience polling. Questions are asked to measure how much students knew about a topic at the beginning of a new section. For example, when I first discussing Islamic art, asked:

How much do you know about the early history of Islam?

i>clickers likewise are used for opinion polling. Students are asked how they would rank certain issues or concepts within an image.

An image is presented with the following question:

What compositional device is most important in focusing your attention in this piece?

In terms of polling format, quizzes and experience polling generated straightforward responses; students responded without talking amongst themselves, and sometimes a bit of discussion is opened up to review aspects of the questions after displaying the answers. The opinion/ranking polling is different; students are asked and encouraged to discuss amongst themselves before the response time is initiated, then the question is asked where students are asked to respond, display their responses, and then break students into groups to discuss their answers or open up a general class discussion. In either case, students are randomly called on to explain their answers after the polling is complete.

Course Overview

Course Title/Subject: Introduction to the History of Art II (1000-1700 CE)

Typical Enrollment/Student Information: ~100 students per class. About 12% to 15% of students are studio art majors and another 12% to 15% graphic design majors; for them, the course is a requirement. The majority of the remaining students, majoring in other areas, take this class to satisfy their Fine Arts core requirement (the course is one of several options they can choose to satisfy this requirement). The class might also include a few art history minors. Art history major begins next year, and might have some majors in the class next fall.

Course Structure: This three-credit course meets twice a week for 75 minutes. There are no teaching assistants (TAs), research assistants (RAs), or any other type of class administration or grading support. The class is limited to 100, and it is usually full. There are no laboratories or discussion sections. Classes generally include presentations, lectures, discussions, and i>clicker activities. i>lickers are used daily in class for attendance, quizzes, and experience or opinion polling.

Course/Student Challenges: Students in this class struggle with learning the material—it is largely visual, and they need to learn both the visual and textual language of art history. They struggle with names of artists and monuments and with art history terms and concepts. In addition, because so much of the course is taught in a darkened room, students are sometimes tempted to sleep. The biggest challenges in teaching this class are helping students understand that the history of art is a scientific and discursive field and not just a series of reactions or opinions; helping students learn about and understand the importance of culture; and, more practically, keeping students' attention for the 75-minute class period.

Course Grading Policy: Students' grades are determined by their performance on three essay tests (65% of final grade), a term paper (25%), and clicker activities (10%).

Results

Successes

- ▶ **Improve Attendance** Students were undoubtedly motivated to attend class because they knew that they would have the opportunity to earn (or lose) points toward their final grade with clickers.
- ▶ **Increased Attention** Not only did students attend more classes, but they also paid more attention once there. They knew they could be quizzed at any time on a term or idea, and their attention is “reset” after each question.
- ▶ **Enlivened Classroom Discussions** The opinion/experience polling allowed for more productive class discussion, whether students are talking in small groups or as a class (in part because there are points attached to the clicker responses—students valued graded assignments more than ungraded, and even a partial-point opinion poll held some importance); these discussions also broke up the lecture and refresh student attention.
- ▶ **Improved Grades** Grades were slightly higher in the two semester i>clicker was used, in part because of better attendance and attention, and in part because of periodic quizzes and discussions. Most importantly, because i>clickers allow measurement of understanding quickly and easily. Lectures could be adjusted according to need. If many students missed a quiz question, the related issues here could be reviewed, and if almost everyone got it right, the class could move on.
- ▶ **Increased Student Engagement** Students enjoyed using i>clickers and saw them as “fun,” so they were more animated in class. In addition, students liked being asked their opinions and were eager to share their thought processes.
- ▶ **Simplified Administrative Tasks** i>clickers undoubtedly made administering the class easier—an important aspect because there is no TA support. It was easier to measure attendance (previously, a sign-in sheet would be sent out, and students would sign for their missing classmates), and it was easier to give quizzes. Before using i>clickers, daily writing assignments or quizzes were given, which were hand-graded; for a 100-student class, this was very time-consuming. i>clicker quizzes are a bit different than a short writing assignment, but they can certainly measure understanding and save considerable time.

“ Because of the many benefits that i>clickers afforded, I will definitely continue to use them in my classroom. They have helped me to improve the class in several important ways, and they were rather simple to implement.

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Challenges

- Preventing students from cheating
 - Solved the issue by identifying the registered students and reviewing the students taking the implemented exam/quiz.
- Initially had to massage the data (from text files to numerical files with decimal points) from the i>clicker software once it was imported into Blackboard.
 - However, once the software was updated, the issue was solved.

These challenges in using i>clickers are relatively minor compared with the positive results achieved.

Conclusion

Because of the many benefits that i>clickers afforded, they will definitely continue to be used in the classroom. They have helped to improve the class in several important ways, and they were rather simple to implement. Moving forward, there is not much that would be changed about the way i>clickers are used. Might increase the number of questions asked per class, and perhaps increase the overall weight of i>clicker points toward final grades. Also, might gradually give more reading quizzes so can minimize lecturing and engage in more class discussions; this is a long-term goal, to hopefully be facilitated with i>clickers.

The key to using i>clicker is to make them mandatory, to use them often in class, and to associate points with every response. Some colleagues don't require them, so only a few students actually take the devices to class. Other professors use them only to take attendance at the beginning of class or perhaps to give a quiz once a week. From experience, integrating i>clickers into classes to break up lectures, interact with students, and measure understanding is much more productive. Only then does the true—and significant— value of i>clicker as an educational catalyst become clear.