

i>CLICKER CASE STUDY: MICHIGAN STATE UNIVERSITY

Economics Professor successfully transitions to larger classroom increasing administrative efficiency and maintaining student intimacy

An international economics course utilizes technology in large sections to create an active learning environment.

Challenge:

With a large classroom format, often students are not aware of their ability to access the coursework – inside and outside of the lecture hall. A University International Economics Professor required a method of providing insight into the level of understanding of students so that he could tailor the review of material more interestingly and effectively.

Solution:

i>clicker afforded the opportunity to experiment and develop different methods of teaching and learning while easily integrating with existing teaching tools.

Benefits:

Students and professors are able to interact via different methods to review coursework assigned in and out of class in a way that enlightens and engages – ultimately improving student participation and comprehension without burdening the professor with additional administration.

Motivation For Using i>clickers

- Increase student engagement.
- Provide students with immediate feedback on their comprehension of course material.
- Provide important and immediate feedback as to how effectively the subject matter has been presented.
- Provide variation to keep and refocus students' attention throughout a long lecture.

Technology Implementation & Usage

Obtaining/Registering i>clickers: Each student is responsible for purchasing a new or used clicker at the local bookstores or students can broker with other students who are reselling their clickers.

Taking Responsibility: Students are required to register their clickers either via the i>clicker website or through the in-class/roll-call registration. (Over 95% of the 200 students are usually registered in class by the second day.)

Classroom Application: Varied technology is used in lectures in addition to clickers including the tablet, data projector, and PowerPoint, which integrate extremely well with the clicker technology.

i>clicker Grading Policy: Students receive credit for answering questions correctly for 1 point per session which is enough to keep students engaged. For the term, clicker points constitute only approximately 6% of students' final grade. To avoid the problems associated with forgotten clickers and absences for different reasons, the maximum number of clicker points possible is less than the total number of class days (typically 20 maximum points for the term out of 26 total sessions).

Daily Use/Questions Asked: Questions are posed at the beginning of class relating to material addressed in the previous session to assess understanding and retention of lecture material and to avoid general misperceptions.

“ Although I've been skeptical of most of the new educational technologies flooding the profession in recent years, this is 1 innovation that, for me, has proven its worth.

Carl Liedholm, Department of Economics, Michigan State University, East Lansing

i>grader Set Session Scoring Help

Go 0

Which of the following is true about the United States?

- The world's largest exporter in absolute terms
- A relatively "closed" economy (X/GDP low)
- Largest trading partner is China
- Largest trading partner is Mexico
- None of the above

Performance Points

Total performance points for this session: 1

Not to exceed 1 points.

Question 2 of 3 < Previous | Next >

Question 2 Correct Answer B

	A	B	C	D	E
Points:	0	1	0	0	0
%:	13	11	41	11	24
Numbers:	19	16	60	16	35

Hide Screenshot Set and Close Cancel

The results — but not the answer — are shown to students, which are widely distributed. When the majority of students answer the question incorrectly, their interest in discussion is heightened. This exercise offers an immediate and tangible means to dispel misconceptions. Once the subject matter is then explained, the same question is posed and with the correct answer and results.

i>grader Set Session Scoring Help

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Question 3 of 3 < Previous | Next >

Question 3 Correct Answer B

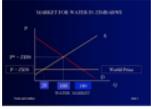
	A	B	C	D	E
Points:	0	1	0	0	0
%:	1	99	0	0	1
Numbers:	1	150	0	0	1

Hide Screenshot Set and Close Cancel

Not only do students see their improvement, they see the value, which is demonstrated with the exercise. Questions addressing areas where there are common misperceptions tend to be the most effective.

Question Examples: The following examples demonstrate conceptual and descriptive questions and the results are posted on the class website:

What quantity of water would be imported into Zimbabwe at a world price of Z\$30?



What quantity of water would be imported into Zimbabwe at a world price of Z\$ 30?

- A. 180
- B. 160
- C. 100
- D. 20
- E. None of the above

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Course Overview

Course Title/Subject: International Economics.

Typical Enrollment/Student Information: ~200 students per class, which attracts upper-division students from a wide array of disciplines with the majority of students, are business or economics majors.

Course Structure: A 3-credit class meeting twice a week for at 8AM for 1 hour and 20 minutes to the class limit of 200. One teaching assistant is assigned to the course to assist with grading and advising.

Course/Student Challenges: The major challenge is maintaining engagement in a large classroom for a long period of time. Clickers are used during the lecture as a mechanism to enhance student involvement and are also useful in addressing other key challenges, such as ensuring that students retain a great deal of information and learn to effectively analyze economic issues.

Course Grading Policy: Class grades are based on 2 midterm exams (worth 40%), a comprehensive final exam (worth 40%), 3 problem sets (8%), attendance (6%), and clicker answers (6%).

Results

Successes

- ▶ **Ease of Engaging Students in Large Class Format.** i>clickers have effectively engaged students in a large class setting allowing autonomy with students; questions that were asked directly to individual students would induce stress. With clickers, students are now engaged with a “relaxed alertness” because they can answer questions anonymously.
- ▶ **Provided Class Format Variation.** i>clickers provide an additional element of class variation to keep (or refresh) student attention, along with the occasional video clip, class game, PowerPoint review, and other such devices that are so crucial to keep students engaged in a long class. Just the 1- or 2-minute pause from the daily routine recharges students and refocus their attention.
- ▶ **Provided Immediate Feedback to Instructor.** The majority of students sometimes fail to answer an i>clicker question correctly but having the ability to track this information allows material instruction to be restated in a different way to ensure students understand and can answer the question correctly.
- ▶ **Improved Exam Scores.** Generally speaking, students perform better on exams due to their increased understanding and first hand interaction with learning material.

“ Not only do students see their improvement, they see the value I’ve added with the i>clicker exercise.

Carl Liedholm, Department of Economics, Michigan State University, East Lansing

Conclusion

In summary, i>clickers have been a valuable and welcome addition to the delivery of the International Economics curriculum. i>clickers have consistently provided important benefits for students and faculty alike year over year.