

# Classroom Response Systems

*A way to engage with all learners*

Workshop, August 2016

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# Plan

- Introductions
  - Our teaching contexts
  - Participants (clicker demo)
- *Tips and Considerations*
- i>clicker basics
- Learning Catalytics basics
- Piazza basics
- *Open Questions*
- Other Response Systems (if time)
  - PulsePress, CLAS, TopHat...
- *For each technology (~7-10 minutes)*
  - *Overall look*
  - *Best use case*
  - *Cost to students*
  - *Student feedback*

Have you ever used any of the three main technologies we're featuring today?

*i>clicker, Learning Catalytics, Piazza*

A. No

B. Yes, i>clicker

C. Yes, Learning Catalytics

D. Yes, Piazza

E. Yes, two or three of these technologies

# What is your typical class size?

- A. <40 students
- B. ~40-75 students
- C. ~76-150 students
- D. ~151-250 students
- E. ~251+ students

If you were to use a Classroom Response System, do you need students to be able to enter text?

- A. Yes, both during class and before or after class
- B. Yes, during class only
- C. Yes, before or after class only
- D. No
- E. I don't know

What do you hope to learn today?  
(Share with your neighbour, Build-a-  
slide, Vote)

# The UBC CRS landscape

- Endorsed/Supported iClickers, circa 2007
- Support continues for iClickers (CTLT, Arts ISIT)
- Other CRS partially supported
- Report in 2014 said “we can’t decide”
- No site licenses

Benefits?



# Considerations

- Attendance
- How much time to give for each question
- How will you use aggregate or individual data (reports/analytics)
- Student tool and cognitive overload
- Graded answers
- Group work
- With PPT or full lecture replacement
- Peer learning
- Cost to students
- Student anonymity and privacy compliance

# Classroom Response and the Lesson/Lecture/Session Plan

- *What will you do the moment the data come in during class?*
  - Summarize and leave it
  - Two-round question – group debate then re-answer
  - Ask another question
  - For text responses: review ‘good’ and ‘bad’ answers?
  - Change your lesson on the fly? Review, go back, jump forward.

# Learning Catalytics

- Built from Peer Instruction pedagogy
  - Two-round questions – individual, then discussion, then answer again
  - Grouping of students on seatmap to mix correct & incorrect
- Many question types
  - I use all the standard ones plus
  - Drawing, Target regions
  - Sorting, matching, priority
  - Short & Long answer text
- Text questions great, but need lots of practice to show and get learning value out of them
  - Anonymity is key, but invites some shirking

Response type

## **Instructor-Led Synchronous**

Students respond individually to questions as they are delivered one at a time, typically in

## **Automated Synchronous**

Students respond individually to questions as they are delivered one at a time in an

## **Self-Paced**

Students respond individually to questions in any order, typically outside of class.

## **Self-Test**

Students respond individually to questions in any order and receive feedback on each of their responses

## **Team-Based Assessment**

Students respond individually to all questions in the module, and then gather in their

# Learning Catalytics Demo

- Go to [www.learningcatalytics.com/demo](http://www.learningcatalytics.com/demo)
- Enter the information
- On the next screen, enter **17286594**  
as the class session ID

# TopHat

- Intermediate between iClickers and LC
- Aggressive sales
- Poor export/analytics

The screenshot shows a web browser window with the URL <https://app-ca.tophat.com/e/656027>. The page displays a 'Create a Discussion' modal form. The form has the following sections:

- Title:** Discussion 1
- Topic:** Enter the topic of the discussion
- Grading Options:** Correctness: 0.5, Participation: 0.5
- Response Options:** Responses can be seen by **Everyone**, Participants are anonymous to **No one**, and a toggle for 'Allow students to respond with a drawing' is turned on.
- Upload an image to start the discussion**

At the bottom of the modal are 'Cancel' and 'Save' buttons. The background shows a course interface for 'POLI380.2013W2' with a 'Create' button and a list of items including 'Questions', 'Grandmother's Age', 'Question 2', 'word test', 'Discussions', and 'Will the NDP win?'.

Comparison	Cost (term, year, lifetime)	Devices	Question Types	Integrations	Features
iClicker	\$45 lifetime (or Reef 20,30,60)	hardware	multiple choice, (numeric and word with REEF system)	PPT	Aggregation only
TopHat	\$24/\$36/\$72	Mobile, sms	Multiple choice, word answer, numeric, sorting, matching, click on target	LMS, PPT	Discussions, tournaments, reports?
Learning Catalytics	\$12USD, \$24USD	Web, mobile	Composite sketch, Confidence, Data collection, Direction, Expression, Highlighting, Image upload, Long answer, Many choice, Matching, Multiple choice, Numerical, Priority, Ranking, Region, Sketch, Word cloud, Slide	PPT, gradebook to LMS	Asynchronous Delivery, Peer Instruction through seatmap and algorithm,
Socrative	\$49/instruct or/year		Multiple choice, true/false, short answer		Only 10 'rooms' 150 S max, student 'hand raise', 'space race' countdown game,
Piazza	free		Text discussions, polls	Connect (LMS)	Discussions, Q&A, excellent analytics/gradebook

# More

- Pulsepress
  - UBC-made twitter-like “classroom backchannel”
  - Other similar options: todaysmeet, chatzy, backchannelchat, google slides, kahoot (gameifie
- CLAS
  - Arts-built Video platform with lecture/class recording and classroom backchannel synchronization
- Plickers
- Google Docs (<https://is.gd/qvAu58> )

# Info / Bibliography

- Arts ISIT
  - <https://isit.arts.ubc.ca/classroom-response-systems-strategy/>
- CTLT
  - <http://elearning.ubc.ca/toolkit/clickers/?login>
- Carl Wieman Science Education Initiative
  - <http://www.cwsei.ubc.ca/resources/clickers.htm>
- Comparison Table
  - <http://socialcompare.com/en/comparison/student-response-systems-2mqrfu3t>
- <https://cft.vanderbilt.edu/guides-sub-pages/clickers/>
  - <https://cft.vanderbilt.edu/docs/classroom-response-system-clickers-bibliography/>



# Blogs, how-tos, etc.

- <http://nikpeachey.blogspot.ca/2015/09/managing-digital-classroom-using.html>
- <https://derekbruff.org/?p=3187>
- <http://theinnovativeeducator.blogspot.ca/2013/03/6-free-ways-to-capture-student.html>
- <http://blogs.reed.edu/ed-tech/2016/03/plickers-an-excellent-alternative-to-clickers/>
- <https://prezi.com/iekcjjaoxae2/learning-catalytics-a-new-tool-for-student-responses-inside/>