

Introduction to Clickers

Part 1: Tech & Prep

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Outline

Part 1 (today)

- Setting up the technology
- Reasons for using clickers
- Lecture notes → clicker questions

Part 2 (mid September)

- How to ask a clicker question
- How to respond to the students
- Novel uses of clickers

Things I will share

- These slides
- Additional resources on clicker 'best practices'

What is a clicker?

Clickers are an audience response system that gives you real time feedback from students.

The generic term is 'clicker' but at UBC we use the 'iClicker'

- I still just call this a 'clicker'

Let's play

Read the back of the clicker and change the frequency to 'AD'

Clicker Q: I want to use clickers for:

- A) Checking if the students are following/understanding
- B) Assessing their prior knowledge
- C) Correcting Misconceptions
- D) Encouraging group work
- E) Stimulating whole class discussion

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Any other reasons?

Set up & Technology

Things to do:

- Download the [software](#) (new for Canvas)
 - Put on laptop or USB
 - Set course preferences (grading)
- Connect to the clicker base
 - A switch is hidden in the podium
- Have students register their clicker on [Canvas](#)
 - And *eventually* sync the grades through the clicker Gradebook

Reasons for Using Clickers

Some advantages:

- If they know it - move on
- Enhances group work (eg. pairs)
- Easier to start a conversation
 - Do you like 'A' or 'B'?
- Enriches class discussion
 - Student questions/comments will be deeper
 - You'll hear from more students
- Student commit to an answer
 - And will be more likely to change their opinion if they chose wrong
- General polling
 - Set office hours
 - % of class that is lost or confident/not confident

Creating Clicker Questions

We probably already have notes ... how to get the questions?

Aside: does everyone have a course in mind right now?

Tips:

- Do you know any common misconceptions?
- After some lecture - ask them a question you think will demonstrate understanding
- Do you suspect they already know this? See if they do.
- Think 'what do I want them to be able to do.'
- Clickers will shine on more conceptual questions

Example Clicker Qs

With your particular course in mind - try to come up with a clicker question.

I also have a few examples from my own lectures.

Replace Examples in Lecture
Address Misconceptions

Clickers: Some Examples

Clicker Q: Can a function cross its horizontal asymptote?

A) Yes

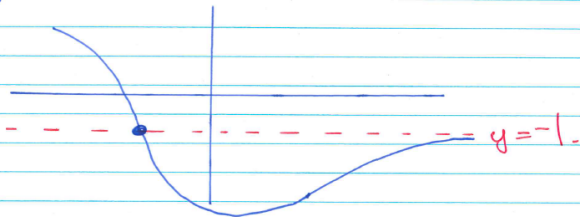
B) No

Clicker Q: Can a function cross its horizontal asymptote?

→ A) Yes 33%

B) No 67%

C) Don't know



Clickers: Some Examples

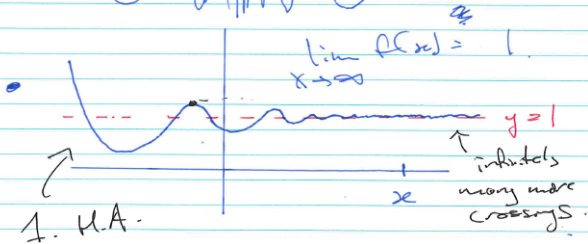
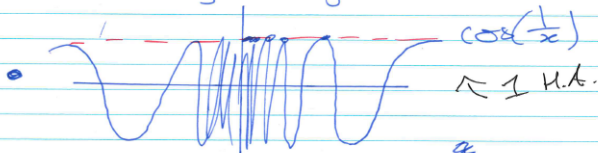
Clicker Q: How many times can it cross its h.l.a.

A) 1
B) 2

C) a few times (finds many).

D) ~~infinitely many times~~

→ infinitely many times.



A few points to bring up:

- Talk to your students about why you're using clickers
- Have a clear pedagogical goal in mind

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Clicker Q: Should you give grades for getting the correct answer?

A) Yes

B) No

Clickers!

Feel free to come to me with questions or for support.

And thanks!

Clickers!

The Clicker “song and dance”

- Display or write the question (don't read it aloud)
- “Take 1 minute to think about this on your own”
 - or “feel free to discuss with your neighbour”
- *Instructor can walk around, listens to conversations, facilitates as desired*
- “Ok, click in, I'm going to close the poll”
- Respond

A few response strategies

- Validate the correct answer. Brief justification. Move on.
- Validate correct answer. Ask students for an explanation.
- Show results. Narrow the options. “Find a different opinion and come to a consensus”
- “Can I hear an argument from B”
- Exclude an answer: “Lots of B’s ... that’s not the answer”
- “Can I hear an argument for why not C?”

Other things we could talk about

- Makes it really easy to ask as specific question to start a conversation: “do you like A or B?”
- Great for diagnosing or treating a misconception
- Just for participation (or not for marks at all)
- Talk with your students about why you are using clickers
- Culture: E always means “I have no idea”
- Conceptual vs Computational clicker questions