

# An Overview of Clickers and Their Uses



## Panelists

- Mike Truong, Instructional Technologist, CRTE
- Katie Winder, Assistant Professor of Economics, SSHA
- Jodon Bellofatto, Classroom Technology Specialist, IT

# Presentation Outcomes

*By the end of this presentation, you will...*

1. Be familiar with clickers and how they are used in a typical classroom (Truong).
2. Better understand why one faculty chose to use clickers, how they are used in class, and what is entailed (Winder).
3. Know what equipments are needed and how to get support on campus (Bellofatto).



# What are clickers?

- Clickers are mini-remote controls that use radio frequency technology to transmit responses to a portable receiver.
- Each clicker can be registered to a student and generates a unique, identifiable signal.
- Instructors can use clickers to increase student engagement and interactions, especially in large lecture environment where class size limits faculty-student interaction.
- When used effectively, clickers can enhance the classroom experience by making it livelier and more interesting.



# How are clickers typically used?

## Advance (evaluating and creating)

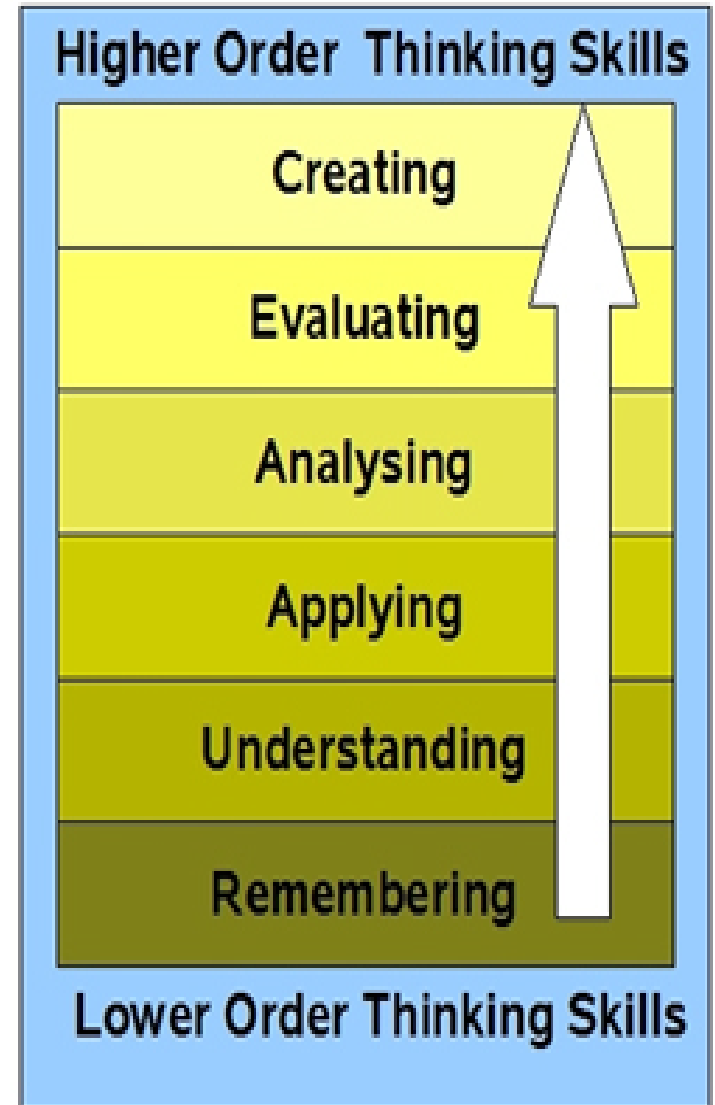
- Combine ideas to formulate a new idea.
- Judge between two competing ideas.

## Intermediate (applying and analyzing)

- Elicit/reveal pre-existing thinking, understanding, or knowledge.
- Apply ideas in a new context or explore implications.
- Predict results on experiment, simulation, or videos.

## Basic (remembering and understanding)

- Survey students about their background or opinions.
- Quiz on the assigned readings.
- Test recall of lecture point.



# Recommended Approach

1. Question
  - Instructor poses question.
2. Peer Discussion
  - Students have time to discuss the question in pairs or small groups.
3. Vote
  - Students submit answer using clickers.
4. Whole-Class Discussion
  - Instructor and students have follow-up discussion, emphasizing “why” or “why not”
5. Re-Vote (optional)
  - After discussion, allow students to reconsider their original vote and re-vote if necessary.



# A Faculty's Testimony

Katie Winder

Assistant Professor of Economics

- Why clickers?
- How do I use them?
- What is involved in using clickers?



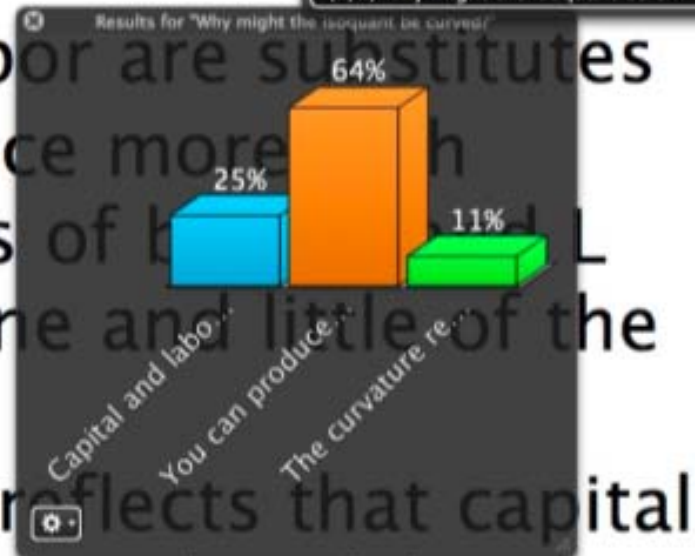
# Why clickers?

- Feedback on the fly
- Assessment
- Attendance



# Why might the isoquant be curved?

1. Capital and labor are substitutes  
You can produce more with medium values of both than a lot of one and little of the other
2. The curvature reflects that capital is more expensive than labor in general
- 3.





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Responses 77 Feedback 4

## Figure 9.1. Cobb-Douglas isoquants

Results for "Question 3"

An isoquant means "equal quantity"

A curve that describes all the combinations of inputs that produce the same level of output

In this case, given  $a = 1/3$  and  $b = 2/3$ , we can solve  $y = K^a L^b$  to obtain  $K = \sqrt[3]{L^{-2}}$

Answer	Percentage
Answer 1	81%
Answer 2	16%
Answer 3	0%
Answer 4	0%
Answer 5	0%
Answer 6	1%
Answer 7	0%
Answer 8	1%
Answer 9	1%
Answer 10	0%

Click to add notes

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Slide 7 of 26

# 9 Answer 9

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Results - <http://www.stata-press.com/data/r10/nlsw88.dta>

grade	.5894591	.855624	9.16	0.000	.4003785	.6185397
tll_exp	.2159495	.8247472	8.73	0.000	.1674195	.2644795
south	-1.836844	.2235284	-4.64	0.000	-1.475191	-.5984972
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Polling Open

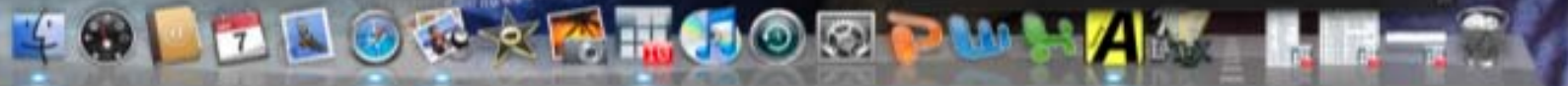
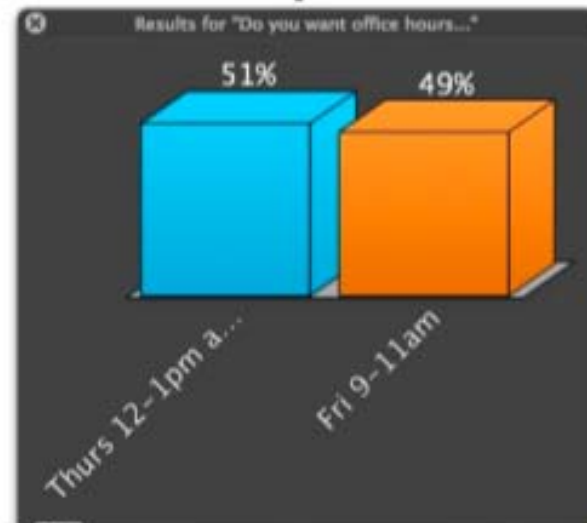
Responses | Feedback

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# Do you want office hours...

1. Thurs 12-1pm and 3-4pm
2. Fri 9-11am



# What equipment do you need?

- Laptop/Computer (Mac or PC)
- TurningPoint RF Receiver
  - For academic instructional use (IT Provided)
  - Department/personal use (\$99)
- TurningPoint RF or RF-LCD Clickers
  - Students purchase from the College Store (\$40)
    - Same clicker can be used for all classes
  - Dept. use - purchase a set of clickers
    - Request quote through IT
- TurningPoint Software
  - Free Download
  - TurningPoint Anywhere or TurningPoint w/PowerPoint integration



# How do I get started?

- Download and install the software
  - <https://ucmshare.ucmerced.edu/docushare/dsweb/View/Collection-39456>
- Inform your instructional coordinator of planned class use
  - They will contact the College Store to order clickers for your students
- Create your presentations
  - Online Training Tutorials:  
[http://www.turningtechnologies.com/responsesystemsupport/producttraining/online\\_tutorials/](http://www.turningtechnologies.com/responsesystemsupport/producttraining/online_tutorials/)
  - User Guides:  
<http://www.turningtechnologies.com/responsesystemsupport/productguidesmanuals/turningpointpcsupportdocs/>
- Contact IT to request a Receiver



# How can I get help with clickers?

- Email or call the IT Help Desk
  - [helpdesk@ucmerced.edu](mailto:helpdesk@ucmerced.edu)
  - 209-228-4357
  - Work order will be assigned to Classroom Technology Support team
- **\*NEW\*** - Turning Technology Student Interns
  - Topher Gerhmann ([cgehrmann@ucmerced.edu](mailto:cgehrmann@ucmerced.edu))
  - Ryan Sowers ([rsowers@ucmerced.edu](mailto:rsowers@ucmerced.edu))



# Questions? Comments?





# Resources

- Clicker Resources Guide

- Created by the University of Colorado Science Education Initiative (CU-SEI) and the University of British Columbia Carl Wieman Science Education Initiative (CWSEI)
- <http://goo.gl/eyXt>

- EDUCAUSE Resources

- EDUCAUSE publications and presentations related to clickers
- <http://goo.gl/A1tB>

- Turning Point Guides and Manuals

- Step-by-step instructions for students and faculty on using Turning Point clicker system.
- <http://goo.gl/Rdeg>

