

Using Top Hat as an Alternative to Clickers

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Outline

- My “Clicker” History
- Top Hat Software Use
- My Student’s Thoughts on Top Hat
- My Thoughts on Top Hat

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Kellie Keeling – “Clicker” History

- University of Denver
- Business Information & Analytics
 - Teach Statistics and IT Courses with “clickers”
 - Computer Simulation – First Fall 2009
 - Data Mining
 - Data Visualization
 - VBA and VB Programming
 - Statistical Computing (R and SAS)

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My Clicker History

Which is the output from this code?

```
Dim Sales(5, 2), r As Integer
For r = 1 To 5
  Sales(r, 2) = Cells(r + 1, 2)
Next r
MsgBox "This is the third value: " &
Sales(3, 2)
```

	A	B
1	Name	Sales
2	Kellie	175
3	John	600
4	Sara	518
5	Sam	324
6	James	725

77% 1. First

23% 2. Second

0% 3. Third

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Your Clicker History

- Poll using Top Hat in Browser – Auraria Campus Wireless
 - <https://app.tophat.com/e/834422>
 - Anonymous Access
- I have used traditional "Clickers" in a course I taught.
- I have used a web-based "clicker system" during a class I have taught.

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Top Hat Software

- <http://Tophat.com>

Good! Top Hat might be good for you if you answer "yes" to these questions:

- Do you want your students to **actively engage** with your course content and **participate in teaching each other**?
- Do you want to ensure that your students **complete the session's pre-assigned tasks**?
- Do you want your students to **practice with questions that were asked and answered in class**?
- Do you want to **gather instant feedback on student comprehension** of course content in order to determine the flow of your class?

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Top Hat Software

Better! Top Hat might be better for you if you want to **ask more than multiple choice clicker-questions.**

- Traditional clicker systems rely on hardware that tethers you to your computer and limits you to asking multiple choice questions with up to 5-10 answer choices. Instead, Top Hat resides in the cloud and relies on **students' mobile devices—their phones, tablets, and laptops—so you can ask 7 different question-types, including sorting and word answer.**

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Top Hat Software

Best! Top Hat might be best for you if you're ready to make a substantial change.

- You can upload sketches or images about which students either answer questions or directly draw their answer.
- Top Hat has a **text-chat discussion option** for during the class session
- You can assign **take-home homework and quizzes** that grade themselves.
- You can allow students to **access in-class Top Hat questions after the class session for self-assessment and test preparation.**

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Multiple Choice

Submissions 16

Which value will be returned from:

Kellie = Range("B1:C4").Column

	A	B	C
1	1	5	9
2	2	6	10
3	3	7	11
4	4	8	12

a 1

b 2

c 3

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Multiple Choice

Submissions 24

What would be the size of the queue if we only have 1 server?

a Empty

b A few people in it

c Larger and larger

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Word Answer

Submissions 19 100% % Online
WHAT IS AN EXAMPLE OF A SITUATION OR A PROBLEM YOU MIGHT WANT TO SIMULATE?

Walmart check out lines and weather	
Production process for a factory that has not been built yet	
Production processes	
Target supply chain	
Dia incoming airport traffic	
Flow of customers coming in to buy product	
Car assembly line	

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MSL1-5 INTERARRIVALS:

Submissions 18 100% % Online

If we simulate arrival times into our Ice Cream Shoppe and start at 11:00 and the first 2 customers interarrival times are 3 min and 4 min, what time did customer 2 enter?

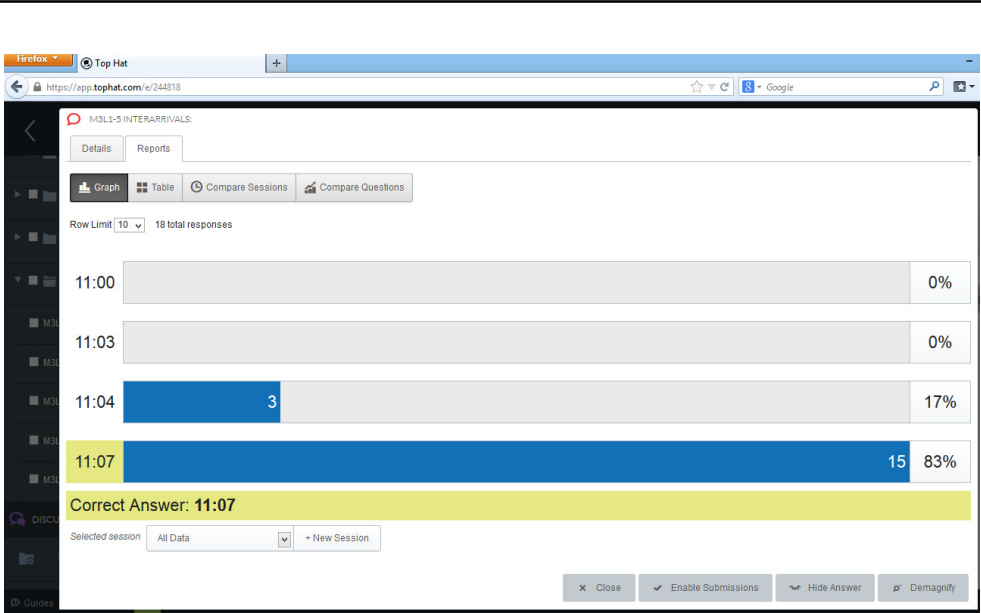
- a 11:00
- b 11:03
- c 11:04
- d 11:07

The instructor has not enabled student submissions for this question

Close Enable Submissions Show Answer Demagnify

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The screenshot shows a web browser window displaying the Top Hat interface for a quiz titled "MSL1-5 INTERARRIVALS". The interface includes a navigation menu on the left with options like "Details", "Reports", "Graph", "Table", "Compare Sessions", and "Compare Questions". A "Row Limit" of 10 is set, and there are 18 total responses. A horizontal bar chart displays the distribution of answers:

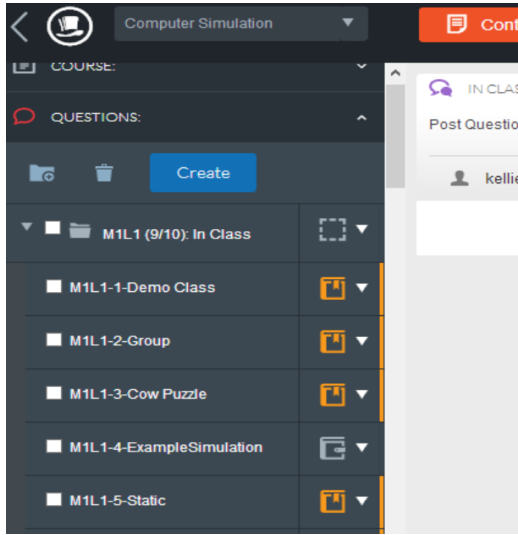
Time	Count	Percentage
11:00	0	0%
11:03	0	0%
11:04	3	17%
11:07	15	83%

The correct answer is highlighted as 11:07. At the bottom, there are controls for "Selected session" (All Data) and "New Session", along with buttons for "Close", "Enable Submissions", "Hide Answer", and "Demagnify".

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Question Items




The screenshot shows the "Computer Simulation" question item management interface. It features a "Create" button and a list of question items:

- M1L1 (9/10): In Class
- M1L1-1-Demo Class
- M1L1-2-Group
- M1L1-3-Cow Puzzle
- M1L1-4-ExampleSimulation
- M1L1-5-Static

Each item has a corresponding icon and a dropdown arrow. A sidebar on the right shows "IN CLASS" and "Post Question" options, along with a user profile for "kellie".

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Creating Questions

ADD QUESTION:

Title

Question

[Click here for instructions on how to embed equations and code](#)

Value	Correct	Delete
<input type="text" value="a"/>	<input checked="" type="checkbox"/>	Delete
<input type="text" value="b"/>	<input type="checkbox"/>	Delete
<input type="text" value="c"/>	<input type="checkbox"/>	Delete
<input type="text" value="d"/>	<input type="checkbox"/>	Delete

Add

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Creating Questions

<input checked="" type="checkbox"/> Show advanced settings									
<input type="checkbox"/> Anonymous Question									
<input checked="" type="checkbox"/> Question has a correct answer									
Upload description image <input type="button" value="Upload"/>									
	<table border="1"> <tr> <th colspan="2">Grading</th> </tr> <tr> <td>Correctness mark</td> <td><input type="text" value="0.5"/></td> </tr> <tr> <td>Participation mark</td> <td><input type="text" value="0.5"/></td> </tr> <tr> <th colspan="2">Timers</th> </tr> </table>	Grading		Correctness mark	<input type="text" value="0.5"/>	Participation mark	<input type="text" value="0.5"/>	Timers	
Grading									
Correctness mark	<input type="text" value="0.5"/>								
Participation mark	<input type="text" value="0.5"/>								
Timers									

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Gradebook – Question Summary

ITEM	PERCENT AVERAGE	PERCENT ANSWERED	STATUS	CORRECT WEIGHT	PARTICIPATION WEIGHT
M1L1-1-Demo Class	96%	96%	✓ Answered	0	1
M1L1-2-Group	96%	96%	✓ Answered	0	1
M1L1-3-Cow Puzzle	80%	80%	✓ Answered	0	1
M1L1-4-ExampleSimulation	76%	76%	✓ Answered	0	1
M1L1-5-Static	74%	92%	✓ Answered	0.5	0.5
M1L1-6-Random	84%	88%	✓ Answered	0.5	0.5

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Gradebook - Student

ID	AVG.	ANSWD.	GRADE
	45%	55%	41.50 / 92.00
	60%	69%	55.50 / 92.00
	29%	40%	27.00 / 92.00
	77%	85%	70.50 / 92.00
	72%	81%	66.50 / 92.00
	45%	52%	41.50 / 92.00
	47%	54%	43.00 / 92.00

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My Use of Top Hat This Fall

- 2 Hybrid Courses
- Und Stat Majors/Minors & MS Grad
- Students read and watch lecture videos before class and complete M/C quiz
- During Class Tues start with 20-25 minutes of Top Hat Questions
- After class Wed-Fri morning optional Top Hat practice questions posted

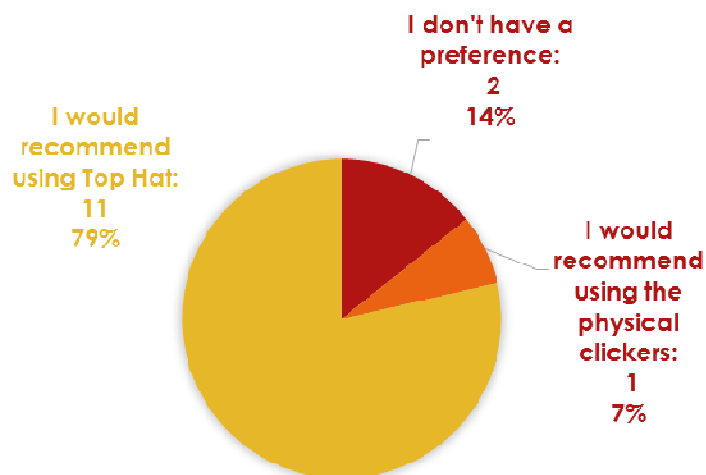
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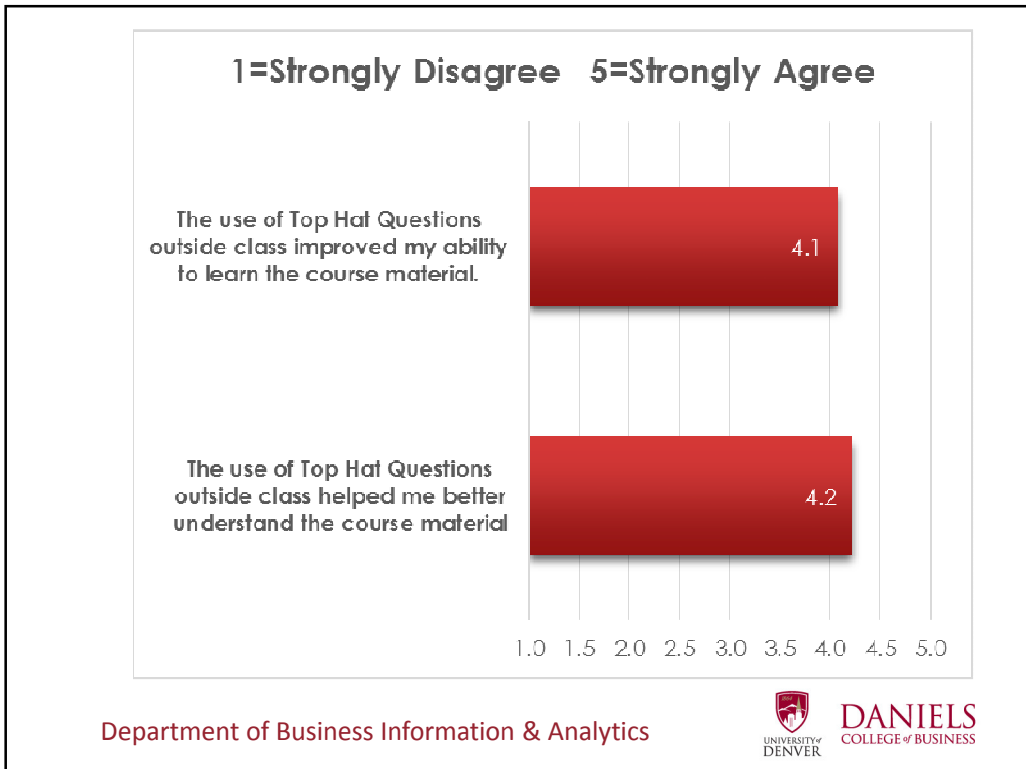
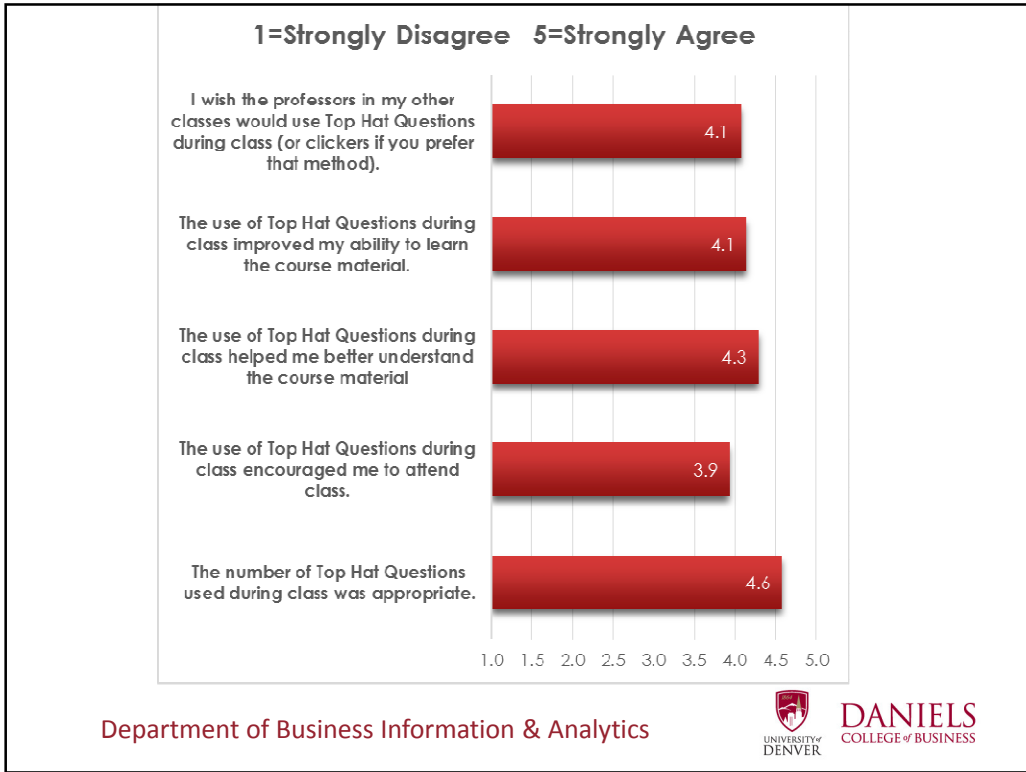


My Student's thoughts on Top Hat

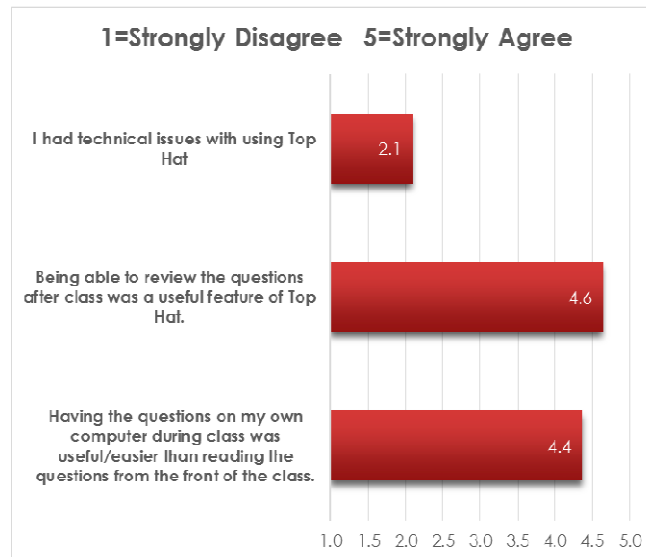
If taking another class that wanted to use the physical clickers or Top Hat software in the future,

N=14 STUDENTS RESPONDED
F' 13 PILOT CLASS





N=12 had used clickers before



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Comments about Inside Class

It was great to have **practice that we could do separately outside of class** through Top Hat

I liked the software, and I think that it was a **good and easy way to help make sure people did the reading and watched the videos.**

Top hat is an efficient method of **engaging the participation of the quiet students** in the class.

I felt Top Hat is a good alternative because it doesn't require people to **purchase the clickers and eliminates people losing or forgetting** their clickers for class.

Comments about Outside Class

I would sometimes **forget to answer** the Top Hat questions outside of class, so if there were some way that the software could email users to remind them of due dates and the like, that would be excellent.

Used it more as **study points/refreshers at home**

One Technical Comment (student never mentioned this!)

While having the questions in front of you - as a student - is helpful, the interface is difficult to learn and navigate.

My Thoughts on Using Top Hat

- Students can see questions/pictures/tables/code on their own screens
- I can leave a question up and add the next one.
- I can show something else on my screen while they still have the questions.
- No clicker devices to deal with being not purchased yet, left at home, out of battery.

My Thoughts on Using Top Hat

- More question types
- Web Based so Updates Automatic
- Like ability to review in-class questions
- Students do need reliable internet connection or text only.

ADD QUESTION:


a
 b **Multiple Choice**

mammal **Word Answer**

12.5 **Numeric Answer**

1 a
 2 b **Sorting Problem**

a → b **Matching Problem**

 **Click on Target**

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Your Thoughts on Clickers

- What is the main advantage you think "clicker" polling provides to you or the students?
- What other questions would you like to pose?

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THANK YOU!

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