Using Top Hat as an Alternative to Clickers

Kellie Keeling
Kellie.Keeling@du.edu
University of Denver

Outline

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

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)
```

![Image of clicker activity]
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.

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?
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.

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.
Multiple Choice

Which value will be returned from:

```
Nellie = Range("Bl:Ct").Column
```

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
</tbody>
</table>

a. 1  
b. 2  
c. 3

Multiple Choice

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

```
Customer 2.5  
Counter 3.5  
2 Servers
```

a. Empty  
b. A few people in it  
c. I know and I care.
## Word Answer

What is an example of a situation or a problem you might want to simulate?

- Walmart checkout 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 to buy product
- Car assembly line

---

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.
Question Items
Creating Questions

Value | Correct | Delete
--- | --- | ---
 a | ✓ | Delete
 b | | Delete
 c | | Delete
 d | | Delete

Click here for instructions on how to embed equations and code.

Creating Questions

- Show advanced settings
- Anonymous Question
- Question has a correct answer

Grading:
- Correctness mark: 0.5
- Participation mark: 0.5

Upload description image => Upload

Department of Business Information & Analytics
### Gradebook – Question Summary

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERCENT AVERAGE</th>
<th>PERCENT ANSWERED</th>
<th>STATUS</th>
<th>CORRECT WEIGHT</th>
<th>PARTICIPATION WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1L1-1-Demo Class</td>
<td>96%</td>
<td>96%</td>
<td>✔ Answered</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>M1L1-2-Group</td>
<td>96%</td>
<td>96%</td>
<td>✔ Answered</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>M1L1-3-Cow Puzzle</td>
<td>80%</td>
<td>80%</td>
<td>✔ Answered</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>M1L1-4-ExampleSimulation</td>
<td>76%</td>
<td>76%</td>
<td>✔ Answered</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>M1L1-5-Static</td>
<td>74%</td>
<td>92%</td>
<td>✔ Answered</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>M1L1-6-Random</td>
<td>84%</td>
<td>88%</td>
<td>✔ Answered</td>
<td>0.5</td>
<td>0.5</td>
</tr>
</tbody>
</table>

### Gradebook - Student

<table>
<thead>
<tr>
<th>ID</th>
<th>AVG.</th>
<th>ANSYD.</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>45%</td>
<td>55%</td>
<td>41.50 / 92.00</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>60%</td>
<td>55.50 / 92.00</td>
</tr>
<tr>
<td></td>
<td>29%</td>
<td>40%</td>
<td>27.00 / 92.00</td>
</tr>
<tr>
<td></td>
<td>77%</td>
<td>85%</td>
<td>70.50 / 92.00</td>
</tr>
<tr>
<td></td>
<td>72%</td>
<td>81%</td>
<td>86.50 / 92.00</td>
</tr>
<tr>
<td></td>
<td>45%</td>
<td>82%</td>
<td>41.50 / 92.00</td>
</tr>
<tr>
<td></td>
<td>47%</td>
<td>54%</td>
<td>43.00 / 92.00</td>
</tr>
</tbody>
</table>
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

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=12 had used clickers before

1=Strongly Disagree 5=Strongly Agree

- I had technical issues with using Top Hat: 2.1
- Being able to review the questions after class was a useful feature of Top Hat: 4.6
- Having the questions on my own computer during class was useful/easier than reading the questions from the front of the class: 4.4

Department of Business Information & Analytics

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.

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?
THANK YOU!
Using Top Hat as an Alternative to Clickers

Kellie Keeling
Kellie.Keeling@du.edu
University of Denver