A Mobile Audience Response System and Learning Platform for Student Engagement

Steve Lampa & Patrick Wilson

Department of Integrated Physiology and Neuroscience

College of Veterinary Medicine; Washington State University

College of Veterinary Medicine
Teaching Academy
Washington State University
Making Teaching Matter

Objective:

- To learn how to integrate a mobile audience response system (ARS), Top Hat, in the classroom to improve student engagement. https://tophat.com

The Top Hat system is just one of many mobile (BYOD) classroom engagement platform that can be accessed from any mobile device.

Rationale for Using Mobile ARS Technology

- Mobile ARS technology replaces older clicker technology.
- It provides **meaningful and timely feedback** in large and small classroom settings that is sometimes challenging and difficult.
- It engages **all students simultaneously** with material, as a basic active learning strategy.

From Gosseau et al. (2016) use mobile ARS as a tool to support teaching, not as the focus of your teaching

Top Hat Course Experiences

1. **F2015- S2017** in the **Veterinary Medicine (VM) 510/511/512** microanatomy and gross anatomy courses
   - Questions used for engagement, stimulate peer interactions & participation
   - Peer teaching to assess daily student presentations (peer teaching and communication exercises for students feedback) in VM 511
   - Daily anatomy lab questions (**review or key concepts**)

2. **S'2016 & 7** weekly in **Neuro 404** labs and lectures.
   - Weekly MCQ problem sets and review questions (e.g. short answer, click on target, matching) for integration of lecture & lab concepts.
   - Created **on-line** laboratory manual in collaboration with Top Hat.

3. **Veterinary Anatomy 308**
   - Questions used for engagement, stimulate peer interactions & participation; Afterward, questions are available for review.
   - Weekly prefix, suffix and root word matching questions as homework.

What Can Top Hat Do?

- **In-class questions (BYOD-ARS**) — Multiple formats of questions available
  - Anonymous or not
  - Graded or not, participation credit or not
  - Synchronous or asynchronous (self-paced)
  - Option to leave open as review questions
- **Out of class questions**
  - Answer submissions with or without hints or feedback
  - Homework or Review Questions
- **Pages** – more complex content +/- embedded questions; electronic documents
- **Discussions– anonymous surveys**
- **Attendance feature (NOT A REASON TO USE TOP HAT)**

Top Hat Student View and Activities

A course called "**Top Hat How To**" Sandbox Course, was created go to the following URL https://app.tophat.com/e/948529; to demonstrate how Top Hat looks from a learners perspective.

Question on the Fly!

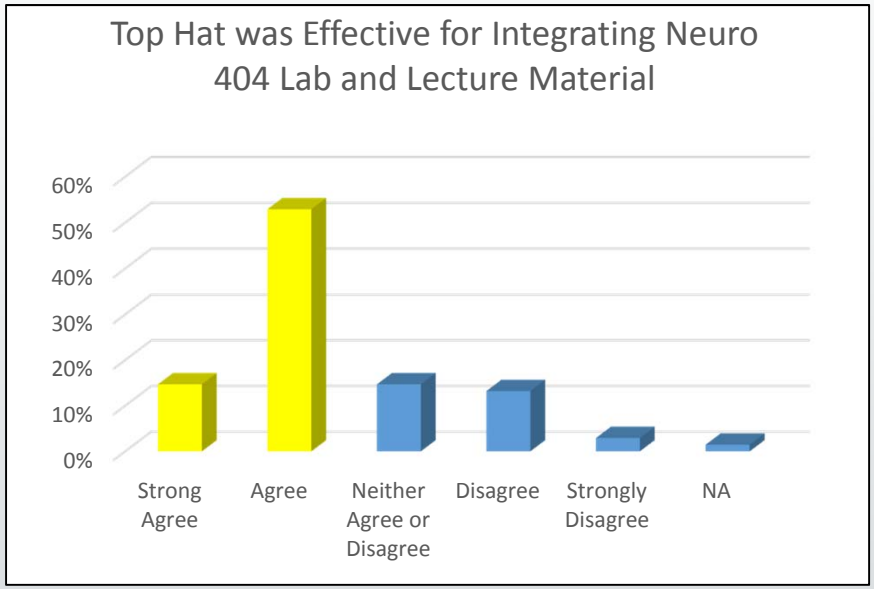
- Uses **Presentation Tool**, which floats inconspiciously over your presentation software (Powerpoint, Keynote, other).
- May choose multiple choice, word answer or numeric answer questions. Option to attach screen shot.
- After students respond (or before they are done) have option to view spread of answers, indicate right answer.
- Saves as “Quick Ask” question in course Content with date and time.

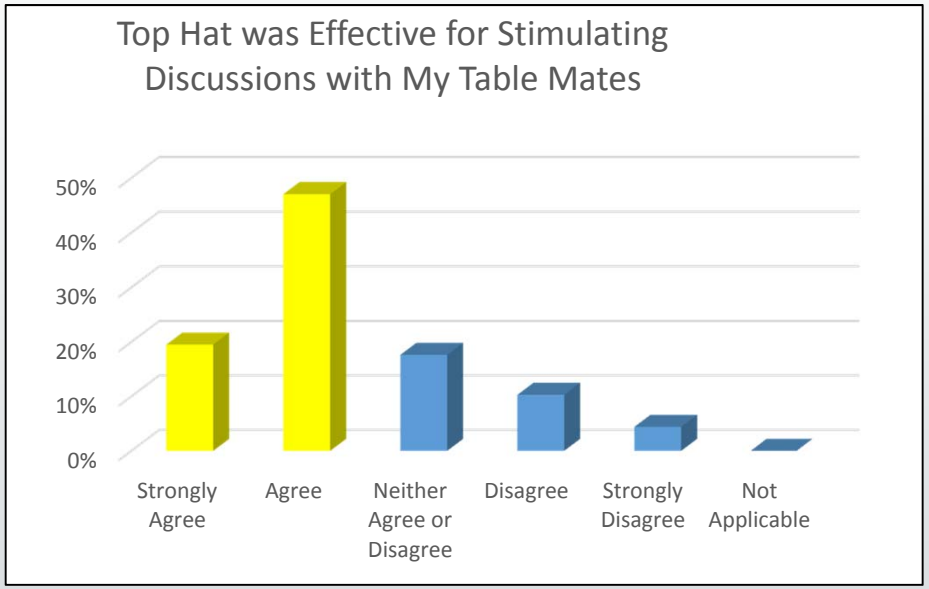
Now create your own course in Top Hat and create a couple sample questions then share out (present a question).

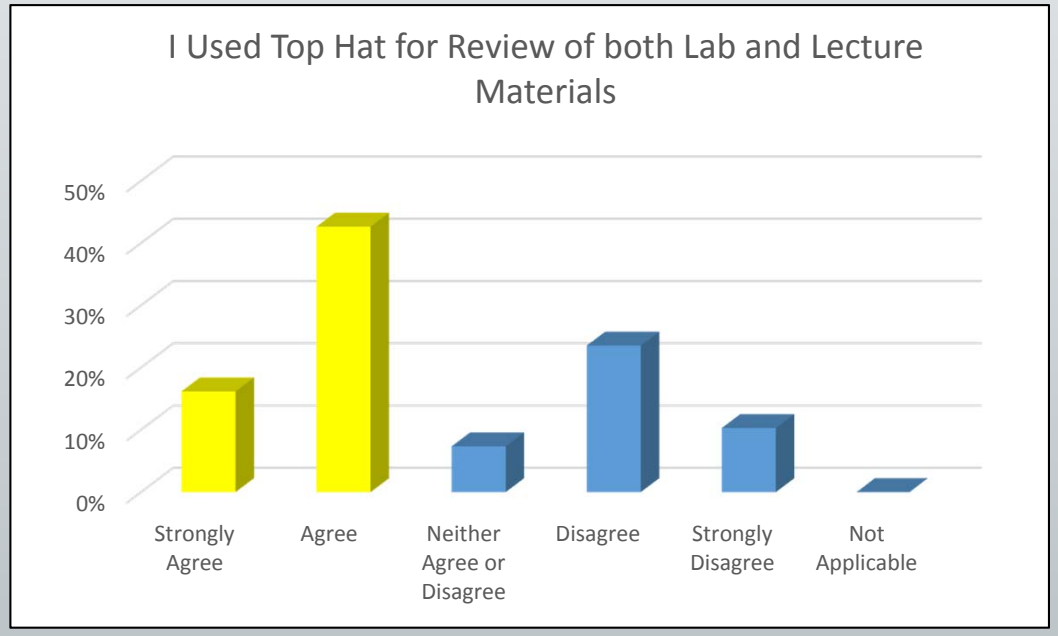
- If you haven't signed in create instructor account to create an account. If you want your students to access it will need them to have student accounts.

- Take a few minutes to create a question if you have a device that is capable.

Neuro 404 Student Responses







Resources

Cain J., Black E. P., & Rohr J. (2009). An audience response system strategy to improve student motivation, attention, and feedback. *American Journal of Pharmaceutical Education*, 73(2).

Mayer R., Stull A., DeLeeuw K., Almeroth K., Bimber B., Chun D., Bulger M., Campbell J., Knight A., & Zhang H. (2009). Clickers in college classrooms: Fostering learning with questioning methods in large lecture classes. Contemporary Educ Psych. 34: 51-57. http://www.sciencedirect.com/science/article/pii/S0361476X08000295

Orlando, J. (2010). Using Polling and Smartphones to Keep Students Engaged. In *Faculty Focus.* Retrieved from http://www.facultyfocus.com/articles/effective-teaching-strategies/using-polling-and-smartphones-to-keep-students-engaged/

Gousseau M., Sommerfeld C., & Gooi A. (2016). Tips for using mobile audience response systems in medical education. Adv Med Educ Pract. 2016 Dec 1;7:647-652 https://www.dovepress.com/tips-for-using-mobile-audience-response-systems-in-medical-education-peer-reviewed-article-AMEP

Abdel Meguid E. & Collins M. (2017). Students' perceptions of lecturing approaches: traditional versus interactive teaching. Adv Med Educ Pract. Mar 17;8:229-24. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5364003/