Socrative as a web-based student response system for students assessment in higher education.

ID learning Module for University faculty

Learning Design & Technology
Youssef Hadiri/ TCC 2015
Presentation Overview

1-Background
• Definition of clickers
• Problem/Solution
• Problem Statement
• Audience Poll
• Literature review

3-Methodology
• Participants/Recruitment
• Data analysis

4-Findings
• Results
• Feedback/Concerns

2-Design
• Theories
• Tools
• Samples

5-Conclusion
• Summary
• Future plans
• Questions?
1. Are you one of the following?

A. University faculty/Professor, TA, lecturer
B. K-12 educator
C. Student
D. Other
Why I chose this research study

• Taught French language in a private school in Oahu
• Participated in professional development training on clickers
• Used e-clickers in assessment
• UH faculty meeting/ International conference in LA
• Living with a family member/ professor at UH
Background

1- Physical Clicker/ SRS
- In-class polling technology
- Handheld devices & receiver
- Requires software setup
- Requires training
- Instructor familiarity with this technology

2- Web-based Clicker/ Socrative
- Web-based In-out class polling technology
- Can be used with smart phones/laptops/Tablets
- Includes Mobile App
- No setup required
- No cost to instructor/ BYOD
- Internet access
- Can be learned Online
Literature review

Pros

• Clickers improve student engagement
• Instructor feedback (Bartsch & Murphy 2011)
• Increase student participation, attentiveness, and the learning experience (Bachman & Bachman 2011)

Cons

• Technical problems (Patterson, Kilpatrick & Woebkenberg 2010)
• Time setting up hardware (Kenwright 2009)
• Cost and dependency on the device (Kay, Lesage & Knaack 2010)
Background

**Problem**
- Faculty time-consuming demands/Research
- Need for instant feedback/improve instruction
- Clickers technical issues/Expense/ familiarity
- Need of convenient online training
- Faculty busy schedule

**Solution**
- Socrative: a web-based clicker
- Instant feedback to students/ faculty
- Support BYOD theory
- No hardware issues/ No cost (free)
- Can be learned online
Problem statement

Develop and evaluate a web-based learning module for university faculty to learn how to use Socrative as a smart response system for student assessment at UH Manoa.
Audience Poll 2

2-Have you used clickers before?
Design phase

Theories

• ADDIE system approach model

• Vygotsky's social-constructivist theory (building knowledge through social interaction)

• The self-directed learning theory (Adult learners take control of their own learning)

• Space repetition theory (Information shift from short-term to long-term memory)

• White/light color theme for background for instructional effectiveness
Design phase

**Tools**

- Weebly website creator
- Youtube videos
- iMovie
- Photofiltre
- Piktochart
- Google docs surveys
Instructional Learning Module

Socratic for students assessment in higher education

Consent form to participate in a research study

Using Socratic as a smart student response system for student assessment in higher education

Aloha and Welcome.

My name is Youssef Nadir and I am a graduate student in the Department of Learning Design and Technology at the University of Hawai‘i at Mānoa. As a partial fulfillment of my Master’s program, I am conducting a research project. Are you a professor or a teaching assistant who is eager to use technology to assess students? If the answer is YES, then you have come to the right place.

The purpose of this research project is to develop and evaluate a web-based learning module for university faculty to learn how to use Socratic as a smart student response system for student assessment at UH Mānoa. A student response system is a wireless system that consists of handheld devices known as clickers and a receiver that electronically stores students' responses. The instructor uses the student response system to evaluate students' understanding and provide them with instant feedback. Unlike the physical student response system, Socratic is a 2.0 web-based smart student response system that requires no software to load and no set up to be done. All that is needed is a device with a web browser and internet connection. The ultimate goal of this research project is to help university faculty use a 21st century technology tool to assess students and provide instant feedback with the intent to improve the learning process.

Participation in this project is voluntary. You have been asked to participate in this study because you are at least 18 years old, you are a university faculty member or a teaching assistant at UH Mānoa, and you own a laptop or an iPhone. This project requires you to have access to a laptop or an iPhone, so it will be used to access the learning module matchup online. The study is to take approximately two hours during a one-
Instructional Learning Module

**Instructional goals**

1. University faculty will be able to use a 2.0 web tool to assess students' performance.
2. University faculty will be able to use Socrative platform to provide immediate feedback to students.
3. University faculty will be able integrate new technologies in teaching and learning.

**Performance objectives**

1. Register, create, and log in to Socrative teacher account.
2. Create and edit quizzes using Socrative web tool.
3. Perform data analysis through viewing live results spreadsheet and analyzing students responses.
4. Perform data transfer via google drive, email, and download.
5. Perform other Socrative tasks such as managing quizzes and performing exit ticket quizzes.
6. Provide students with instant feedback via live results report.
This pre-survey is designed to gather background information regarding demographics, attitudes, technology use, and teaching practices for the study purposes only, and is not meant to assess your individual performance. Please complete this pre-survey before you go through the instructional module. Please enter the same fake name you will create for all surveys/tests you will complete in this study. Mahalo.

**Pre-Survey**

**Enter fake name:** *

1. What is your age range?
   - Under 25
   - 25-35
   - 36-46
   - 47-57
   - Over 58
   - Prefer not to say

2. What is your gender?
   - Male
   - Female
   - I prefer not to answer

3. Please specify your Ethnicity, Origin (or Race).
   - White
   - Hispanic or Latino
   - Native American or Native Hawaiian
   - Black or African American
   - Asian
   - Pacific Islander
   - Other
   - I prefer not to answer

4. What is your highest education level?
   - Bachelors
   - Masters
   - PhD

5. How long have you been teaching at the college level?
   - Less than 1 year
   - 1-5 years

6. Please rate your level of experience using student response system/Clickers.
   - Never heard of it
   - I heard of it but I don’t use it
   - Occasional use
   - Regular use
   - Very frequent use

7. How do you think student response systems/Clickers can enhance the classroom environment?

8. What are the challenges you face when integrating student response systems/Clickers into your classroom?
Instructional Learning Module

Socratic for students assessment in higher education

Lesson 1: Create Socratic Teacher Account

Lesson 2: Create Formative assessment using

Lesson 3: Data Analysis and Transfer
What is Socrative?

Socrative is a free web-based student response system that can be used on any device such as smartphones, laptops, and tablets. Student response systems help instructors engage, assess and provide instant feedback to students. Unlike physical student response systems/clickers, Socrative is a web based student response system/clicker that requires no software to load and no set up to be done. All that is needed is a device with a web browser and Internet access. It is that simple. Socrative enables instructors to gauge students’ understanding while delivering instruction and conduct real-time assessment and data collection via quick quizzes. In this module, we will walk you through how to access the Socrative website, create a Socrative teacher account, and familiarize yourself with this interesting application that accommodates both Android and iOS platforms.

What are clickers?

Physical clickers provide in-class student polling technology that consists of wireless handheld devices and a receiver. This system usually requires both hardware and software setup and a receiving device. This technology is designed to assess students, provide instant feedback, and create an engaging and inviting learning environment that is meant to maximize active learning within the classroom, especially in large enrollment lectures.
Once you sign in, you will be automatically directed to your new Socrative teacher account. The teacher dashboard should appear with a welcome to Socrative message. See image below.

How students can log in to Socrative to complete a quiz.

To complete a Socrative quiz, students will need to log in to the teacher’s room. When you sign in to your Socrative teacher account, there will be a room number on the center of the dashboard. Please provide this number to all your students completing the Socrative quiz. Without this number, students will not be able to log in and see your quiz. Please see the image below to locate the room name/number.

Once your students receive the room number, they can visit the Socrative website to log in. Click here for a quick access. They will need to click on student log in button right next to teacher log in button. After they click on it, they will need to enter the room number/name and click join room to be able to see your quiz/activity. See image below.
Socrative for students assessment in higher education

This post-test is designed to assess the effectiveness of the instructional design module, and is not meant to assess your individual performance. Please enter the same fake name you used in pre-survey. Mahalo

Post Test

Enter fake name here *

1- A student response system (SRS) is ...
   - A wireless response system
   - A handheld device/clicker
   - A receiver that electronically gathers student responses
   - All of the above

2- Socrative is ...
   - A wireless handheld device/clicker
   - A web-based student response system
   - An operating system software
   - A response receiver

3- To create a Socrative account, teachers will need
   - Phone number and email address
   - Full name and email address
   - Full name and home address
   - Email and home address

4- To sign in to Socrative teacher account, instructors need
   - Phone number and a password
   - Username and a password
   - Email address and a password

5- You can sign in to Socrative account using your Google account.
   - True
   - False

6- What type of information do students need to participate in a Socrative quiz?
   - Student account log in information
   - Teacher account log in information
   - Password
   - Room number
How to access Socrative using your mobile devices

For teachers: Socrative offers a teacher and student app that supports both Android and iOS operating systems. You can use your iPhones, iPads, and Android smartphones to use the Socrative teacher/student app. To download the Socrative teacher app, you will need to visit the app store on your device to download it. Click here for a quick access if you are an Android user or here for iPhone users. You can also type in the search bar the word Socrative and it should automatically pop up. The image on left shows update instead of download as I have already downloaded it. The Socrative app is free of charge and labeled teacher with an orange logo. See image on left.

For Students: Students can use their iPhones, iPads, and Android smartphones to use the Socrative student app which supports both Android and iOS operating systems. They can use their own devices to download the Socrative student app and use it to complete the quizzes and activities. To do so, students will need to visit the app store on your device and download it. To learn more about the student app and share it with your students, Click here for a quick access. If you are an Android user or here for iPhone users. Students can also type in the search bar the word Socrative student and it should automatically pop up. The image below shows update instead of download as I have already downloaded it. The Socrative app is free of charge and labeled student with a blue logo. See image on right.
Methodology

Participants
• Target audience: University Faculty (professors, lecturers, Teaching Assistants at UH Manoa)
• Participants: 12 faculty members from different departments at UH Manoa (Professors, lecturers, Teaching Assistants)

Recruitment
• In-person/Announcement boards
• Online/UH website database

Data analysis
Data were analyzed through comparison of
Pre and post survey responses/comfort/attitudes/age
Post test responses/age
Results

Participants
- 12 total
- 7 Males
- 5 Females
Results

**Faculty' Overall Comfort Using Technology**

- Technology comfort pre: 3.33
- Technology comfort post: 3.5

**Faculty' Comfort Using Technology Based on Age Range**

- Technology comfort older pre: 3.44
- Technology comfort older post: 3.44
- Technology comfort younger pre: 3
- Technology comfort younger post: 3.66

Note: 4 = Very comfortable, 3 = Somewhat comfortable, 2 = Somewhat uncomfortable, 1 = Very uncomfortable
Results

**Faculty's Overall Likelihood to Use Socrative for Students Assessment**

- **Socrative likelihood pre**
  - Pre: 3.25
  - Post: 3.75

**Faculty's Likelihood to Use Socrative for Students Assessment Based on Age Range**

- **Socrative likelihood older**
  - Older pre: 3
  - Older post: 3.55

- **Socrative likelihood younger**
  - Younger pre: 4
  - Younger post: 4.33

Legend:
- 5 = Very likely
- 4 = Likely
- 3 = Neutral
- 2 = Unlikely
- 1 = Very unlikely
Post test responses

Overall post test Average Scores

89.8%/100%
Post test responses

FACULTY' POST TEST RESPONSES BASED ON AGE RANGE

- Older faculty: 87.8%
- Younger faculty: 96%

Test scores based on 100%
## Module feedback

<table>
<thead>
<tr>
<th>Constructs/Likert Scale</th>
<th>Rating</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ease of Use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Module was easy to use</td>
<td>4.11</td>
<td>4.00</td>
</tr>
<tr>
<td>Directions are easy to follow</td>
<td>3.83</td>
<td></td>
</tr>
<tr>
<td>Surveys/tests are easy to fill out</td>
<td>4.50</td>
<td></td>
</tr>
<tr>
<td><strong>Learning Quality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Module has helped me understand how to use Socrative</td>
<td>4.16</td>
<td></td>
</tr>
<tr>
<td>I feel more knowledgeable about student response systems</td>
<td>4.33</td>
<td></td>
</tr>
<tr>
<td>The use of videos in the module was useful for learning.</td>
<td>4.25</td>
<td></td>
</tr>
<tr>
<td><strong>Engagement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The length of each section in the module was manageable.</td>
<td>3.66</td>
<td></td>
</tr>
<tr>
<td>The use of technology made learning more interesting</td>
<td>3.83</td>
<td></td>
</tr>
<tr>
<td>I felt that the learning module was engaging.</td>
<td>3.66</td>
<td></td>
</tr>
</tbody>
</table>

5= Strongly agree  4=Agree  3=Neutral  2=Disagree  1=strongly disagree
Module feedback

The learning module rating

- Excellent: 50%
- Very good: 25%
- Good: 16.66%
- Fair: 8.34%
Findings

Feedback
- I like the idea of not having students buy clickers
- Provide more instruction on how to open links in new tabs
- More information on how to export grades would be helpful
- It would have been really helpful to show how it can be used with Laulima
- It will be good if you introduce this software in workshop
- Taught me about something I didn't even know about before hand (SRS, Socrative)
- I don't like programmed learning. I easily grasp new information when it's presented directly rather than going through step by step. But that's just me, I realize. (I'm old-school)
- I will definitely use Socrative/Thank you for introducing me to Socrative

Concerns
- Internet access in some areas in the classroom/buildings
- Less than 60% of participants answered one post test question incorrectly
Conclusion

- The learning module effectiveness
- Increased faculty’s comfort in using technology
- Increased faculty’s willingness to use Socrative
- Younger faculty scored higher, more comfortable/more willing to use Socrative

Category 1
Prefer face-to-face
Willing to implement Socrative
Suggested workshop integration in training

Category 2
Prefer synchronous mode
Willing to implement Socrative
Suggested synchronous online training

Category 3
Prefer paper based assessment tools/Laulima
Not willing to implement Socrative
Future plans

- Blended learning Approach
- Synchronous/ workshops/webinars
- Asynchronous/ e-learning module
- Add info on using Mobile hotspots
- Include Laulima section/ Add more hyperlinks
- Add directions on the web navigation
Special Thanks to

- Dr. Irvine
- Dr. Fulford
- Dr. Grace
- ETEC faculty
- Critical Friends Group (Grant and Mya)
- Classmates (ETEC 687 & ETEC 690)
- Participants
- Starbucks
Any Questions

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Module Link: socrative-for-higher-education.weebly.com