What do I know about using audience response systems “clickers” in the classroom?

1. I currently use clickers in my class
2. I have thought about using clickers
3. I have used clickers but not found the usefulness
4. I am just here for the $15 lunch

Audience Response Systems

“Classroom response systems are instructional technologies that allow instructors to rapidly collect and analyze student responses to questions posed during class.”

- Bruff, D. Teaching with Classroom Response Systems, 2009; Vanderbilt University
Technology

- Typically consist of 3 elements:
  - Presentation software
  - Receiver hardware
  - Response devices

Choosing a platform is important to integrating into a program’s teaching philosophy

- True
- False

Audience Response System

Selection, Issues, Usage and Applications

ARS Vendors

- Comtec
- eInstruction
- iClicker
- Qwizdom
- TurningPoint
Who owns your ARS technology?

A. College  
B. Student  
C. Both

Ownership

- Software necessary to create the polling questions
  - Typically installed on faculty workstations, shared computer resources and classroom
- Response device
- Classroom needs a receiver
  - USBkey

Issues

- Who purchases (owns) the response stations?  
- How does a program handle defective response cards?  
- Who purchases the receivers (antennas)?  
- Who purchases the software?  
- Does the purchase of any hardware device include the software?  
- Should the college have additional receivers (antennas) and response cards?

Integration with PowerPoint is a must for implementation of ARS.

A. True  
B. False
**Implementation Considerations**

- Integration of ARS software within PowerPoint or other presentation software
- System's ability to be used as a freestanding application outside of PowerPoint
- Level of difficulty in creating and using polling slides in the learning environment
- Complexity of the ARS response device
- System's data recording and reporting features

**Classroom Considerations**

- Each system has some specific implementation issues that are unique to that product
- Some systems require the receiver to be “initiated” before the system will work

**Our college offers...**

A. Some training with the system implementation  
B. Consistent and ongoing support  
C. No training on the system

**Faculty Training and Support**

- Faculty development may need to be offered early
- Learn from peers and hear first-hand accounts of benefits and shortfalls of the system
Benefits verses Challenges

Increasing student attention to lecture material is best utilized by incorporating the ARS ________

1. At the end of the lecture.
2. The next day.
3. At 20 minute intervals during the lecture.
4. A week later.

Studies have found that classroom attendance improves when ARS is linked to ______% of the student’s grade?

1. 5%
2. 10%
3. 15%
4. 25%

Student participation is increased due to:

1. Decreased anxiety levels if answer the question wrong.
2. Anonymity during the process.
3. Enjoyable process
4. Promotes overall safe learning environment.
Generating Discussion

- Students think about the question and answers
- Submit their responses
- Sharing
  - Polling results

Other benefits are:

1. Active level of participation
2. Positive student interactions
3. Improved critical thinking and discussions
4. Improvements in grades/satisfaction

Assessment benefits:

1. Immediate feedback.
2. Compare responses with other students.
3. Deficiencies can be addressed.

Assessment and Lecture on Questions

**Assessment**
- Provides feedback on student learning
- Move forward or discuss further

**Lectures**
- Design questions that can be used as lecture topics
Using ARS

- Increased students’ perceptions of learning
- Engagement with lecture content
- Class participation
- Interest in the course
- Performance on examinations
- Enhances traditional lectures by promoting interactivity and initiating discussion

Challenges to ARS include:

1. Technology: cost, ease of use, is it working?
2. Forgot clicker?
3. Increased teacher preparation time
4. Cover less course content—time consuming

Misusing ARS

- As a tool it must be used appropriately to achieve desired results
- Covering less material due to time needed for student responses and subsequent discussion

Outcomes

- ARS lectures scored significantly higher on the final examination than students receiving traditional lectures
- ARS lectures scored significantly higher than students in traditional lectures on test questions that required analytical-type thinking.
- Survey of student satisfaction
  - Students reported more satisfaction with the ARS format
- Survey of faculty members who used ARSs
  - Believed utilization of the ARS systems benefitted student learning, but that less material was “covered” in those classes
Tri-State Best Practices Conference - Tech Savvy Students
Need Tech Savvy Courses: Clickers in the Classroom

As a result of this presentation I will:

1. Definitely utilize clickers in the classroom.
2. Maybe utilize clickers in the classroom.
3. Never utilize clickers in the classroom.

References