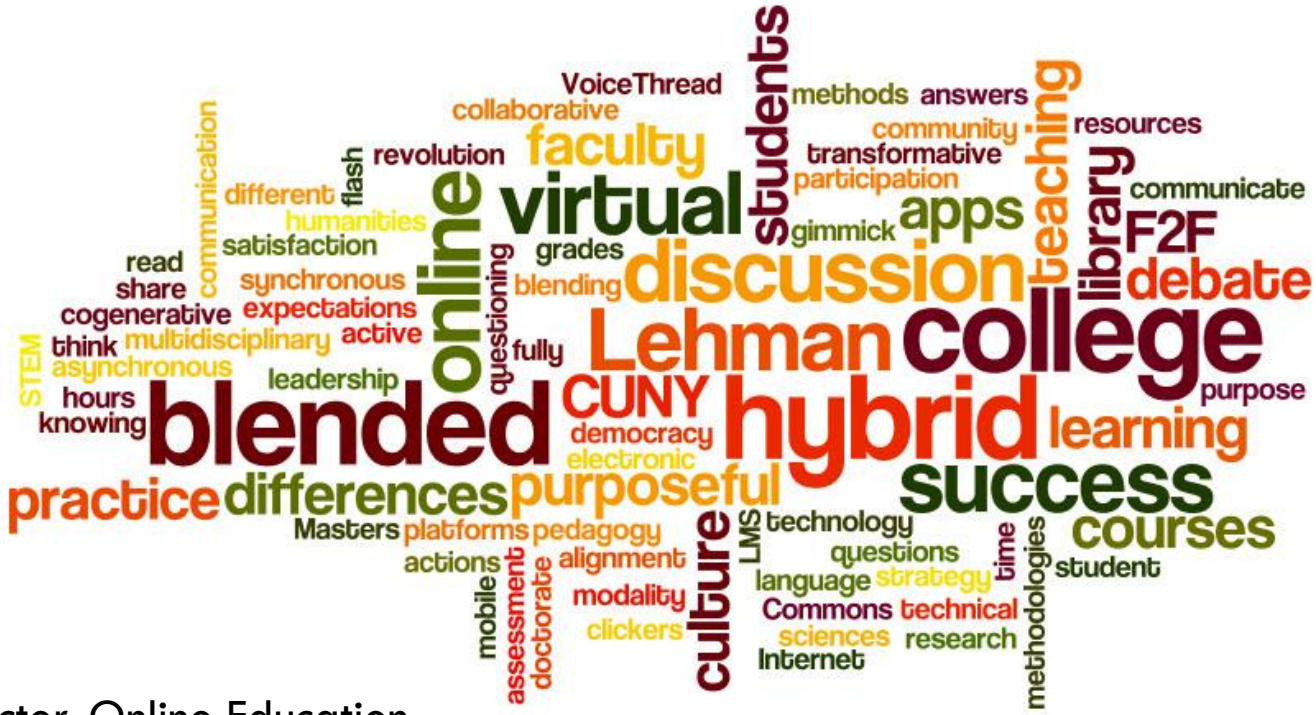
HETS BEST PRACTICES SHOWCASE

Celebrating Technology Innovation for Hispanic Success in Higher Education

ICLICKERS IN THE HYBRID CLASSROOM:

STRATEGIES FOR IMPLEMENTING COOPERATIVE INSTRUCTIONAL TECHNIQUES IN A HYBRID MODEL CLASSROOM



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SEEING TEACHING, NOT AS A PROBLEM (OR FAILURE) BUT SEEING *IN OUR TEACHING* A SET OF PROBLEMS WORTH PURSUING BEST PRACTICES WITH TECHNOLOGY— WORKING COLLABORATIVELY AS AN ONGOING INTELLECTUAL FOCUS

TRUST BUILDING:
COMMUNITIES OF DESIGN APPROACH TO *FOCUS ON A PROBLEM OF PRACTICE*

Consider the relationships between all 3 knowledge bases (Content + Pedagogy + Technology) and seek ways to use technology to address the problem

Community Building: Diverse interactive experiences & managing and setting expectations

Design: Activity (or 're-design)

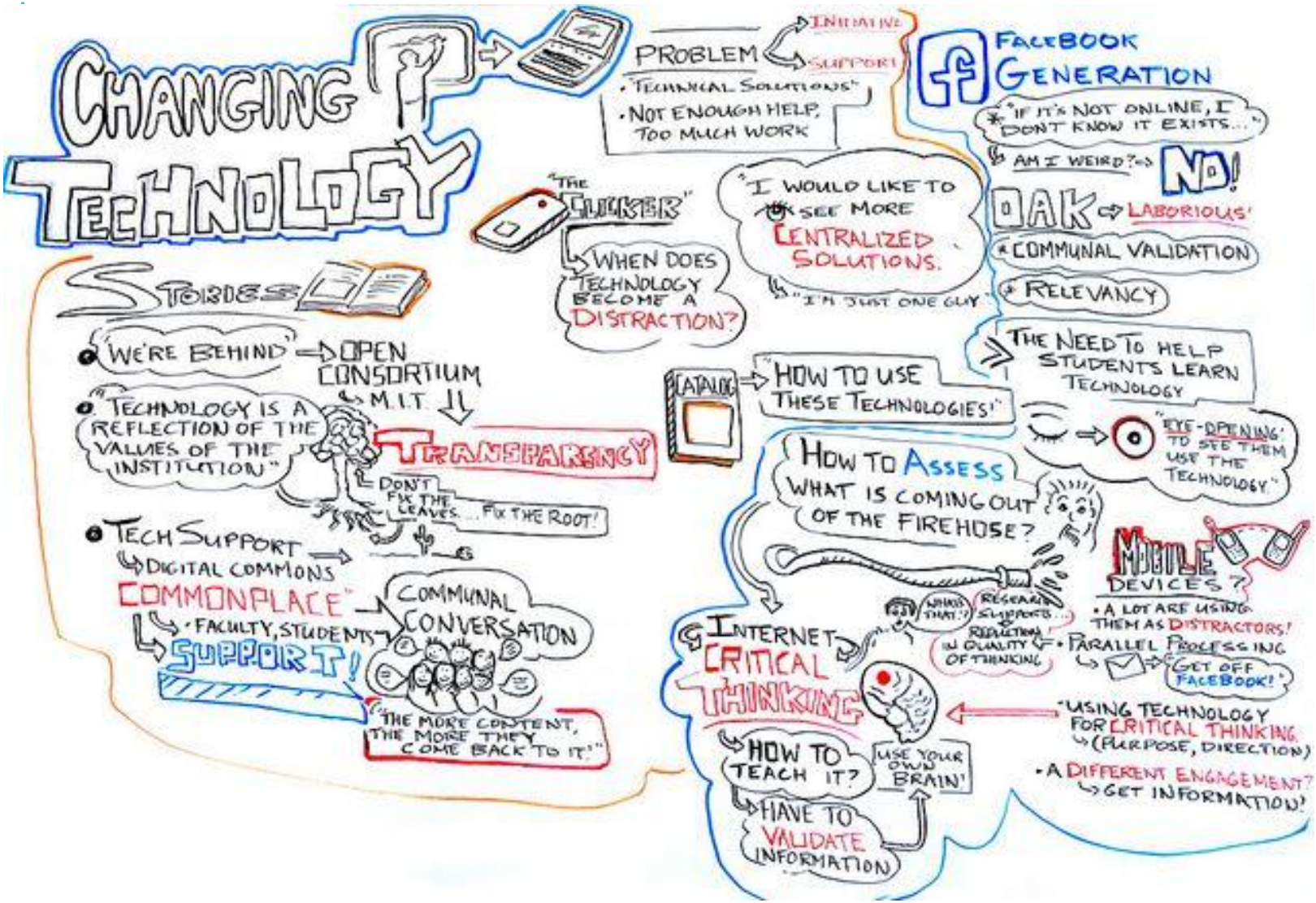
Authentic Problems

Products/Solution

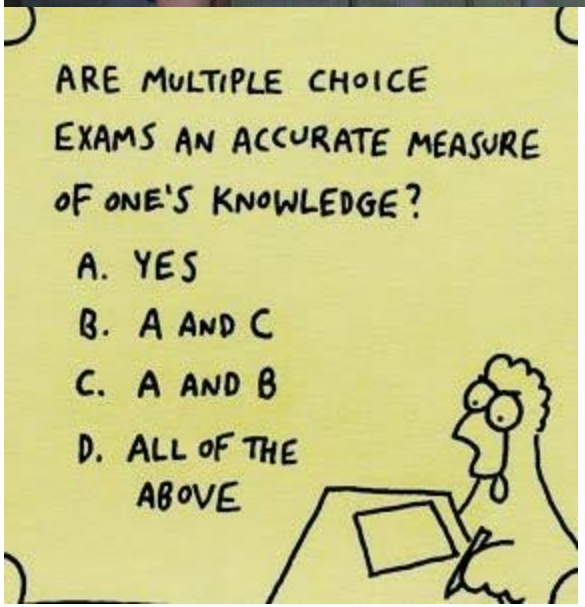
PARTICIPATORY CULTURE:
MEDIA EDUCATION FOR THE 21ST CENTURY
--MAC ARTHUR FOUNDATION

Rather than dealing with each technology in isolation, we would do better to take an ecological approach:

- Thinking about the *interrelationship* among all of these different communication technologies
- The cultural communities that grow up around them
- The learning activities the technologies support


CHANGING TECHNOLOGY
PROBLEM
INITIATIVE
SUPPORT
"TECHNICAL SOLUTIONS"
NOT ENOUGH HELP, TOO MUCH WORK
FACEBOOK GENERATION
"IF IT'S NOT ONLINE, I DON'T KNOW IT EXISTS..."
AM I WEIRD? NO!
OAK LABORIOUS
COMMUNAL VALIDATION
RELEVANCY
"THE CLICKER"
WHEN DOES TECHNOLOGY BECOME A DISTRACTION?
"I WOULD LIKE TO SEE MORE CENTRALIZED SOLUTIONS."
"I'M JUST ONE GUY"
STORIES
"WE'RE BEHIND" → OPEN CONSORTIUM
M.I.T.
TRANSPARENCY
"TECHNOLOGY IS A REFLECTION OF THE VALUES OF THE INSTITUTION"
DON'T FIX THE LEAVES... FIX THE ROOT!
TECH SUPPORT
DIGITAL COMMONS
COMMONPLACE
FACULTY, STUDENTS
SUPPORT!
COMMUNAL CONVERSATION
"THE MORE CONTENT, THE MORE THEY COME BACK TO IT!"
CATALOG
"HOW TO USE THESE TECHNOLOGIES!"
THE NEED TO HELP STUDENTS LEARN TECHNOLOGY
"EYE-OPENING" TO SEE THEM USE THE TECHNOLOGY
HOW TO ASSESS WHAT IS COMING OUT OF THE FIREHOSE?
WHOA THAT!
RESEARCH SUPPORTS... REDUCTION IN QUALITY OF THINKING
MOBILE DEVICES?
A LOT ARE USING THEM AS DISTRACTORS!
PARALLEL PROCESSING
GET OFF FACEBOOK!
INTERNET
CRITICAL THINKING
HOW TO TEACH IT?
USE YOUR OWN BRAIN!
HAVE TO VALIDATE INFORMATION
"USING TECHNOLOGY FOR CRITICAL THINKING
(PURPOSE, DIRECTION)
A DIFFERENT ENGAGEMENT?
GET INFORMATION!

Why do we like quizzes so much?



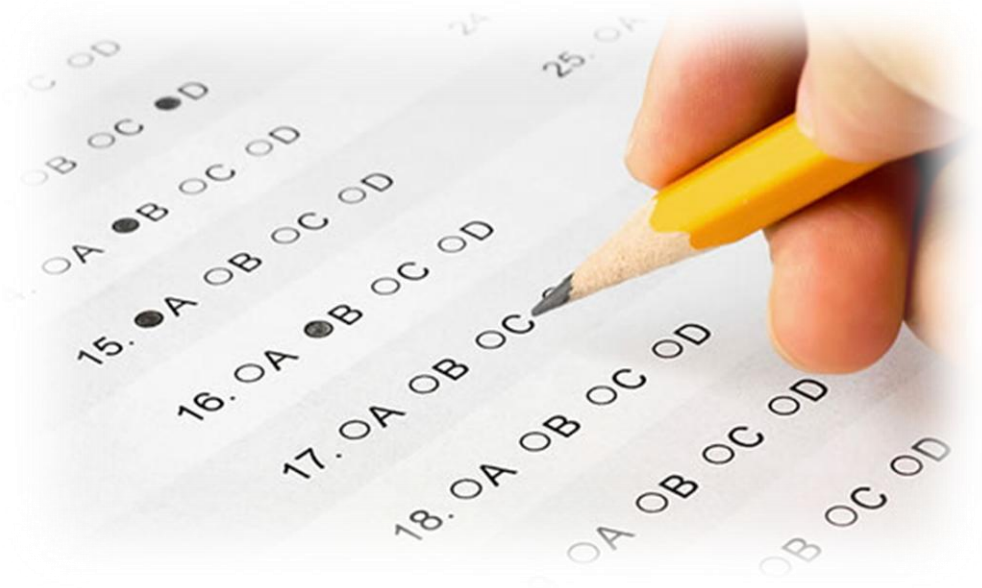
gradpost.ucsb.edu

WHAT HYBRID IS NOT?

- Not just written material that we move online
- Not ‘homework’ (in the traditional sense of the word)

DO TRADITIONAL ASSESSMENTS…

- Motivate students intrinsically and drive student learning?
- Develop students ability to communicate with one another and help them explain their thinking better?
- Help them become more aware of the concepts that are difficult for them?
- Help you adjust your teaching according to immediate student feedback?



WHEN CLICKERS ARE USED WELL,

STUDENTS OVERWHELMINGLY SUPPORT THEIR USE AND SAY THEY HELP WITH THEIR LEARNING

A well-designed hybrid course should foster a collaborative learning environment that encourages students' interactions with the course content, the professor, and fellow classmates

(Hostetter & Busch, 2006).

WHAT ARE CLICKERS?

Which statement best reflects your familiarity with i>clicker?

A. i>clicker…. huh?

B. Heard of them.

C. I've played around with them a little bit or have seen them before.

D. Have some experience using i>clicker.

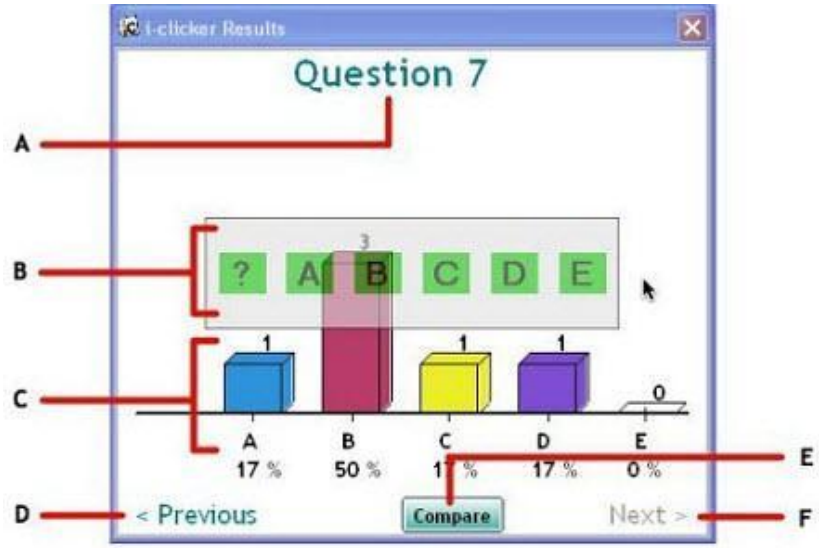
E. I could be up there right now giving this presentation

WHAT WE'LL TALK ABOUT TODAY:

- What are clickers and why should I use them?
- Using i>clicker in a hybrid class
- Assessing the methodology and the student responses
- Questions

A clicker is a versatile, easy to use electronic multiple choice device (called a PRS, personal response system) that helps provide instant feedback on what students are learning. Students report they have fun using clickers and learn at the same time.

What clickers provide is a way to rapidly collect and visually represent an answer to a question from every student in real time…



1. Students are individually accountable
2. Offer professor and students swift, reliable feedback
3. Clarify misconceptions of homework, class lectures or readings.

ARE CLICKERS THE RIGHT FIT FOR YOUR CLASSROOM?

Putting our assumptions and attitudes to the test

in 3-2-1…

TRUE OR FALSE:

I believe my students can support each other's academic growth, and encourage one another's shared knowledge to be effective peer teachers.

A: True; I trust I can take a back seat during a lecture and believe they work well in small groups.

B: False; they need my close attention and guidance during lectures because they're not reading beforehand and we have so much material to cover.

TRUE OR FALSE

The ‘din’ that overtakes a large lecture hall setting when I let my students discuss an issue doesn’t demonstrate a ‘loss’ of control…

A: TRUE; it illustrates interactivity.

B: FALSE; they’d go off task easily

TRUE OR FALSE

Most technologies that have been introduced to me for classroom use have not been a good use of class time- not yet worth the time investment.

A. TRUE; I haven’t found a technology that is easy to learn AND elicits thoughtful and deliberate responses from my students

B. FALSE; I find the technology I use in the class fosters interactivity.

TRUE OR FALSE

If I could find a technology that creates excitement in my classroom, encourages students to read before class and puts them in control of the lecture to meaningfully discuss and debate the reasons for their answers I would use it.

A: TRUE; I'd try it- sign me up.

B: FALSE; My students require too much support so a new technology would be just one more 'thing' for me and them to learn.

PEDAGOGICAL APPROACHES
BARR & TAGG (1995); BUCKLEY (2002)

From	To
Active Faculty	Active Students
Transferring Knowledge	Creating Knowledge
Learning as an individual activity	Learning as cooperative & collaborative
Faculty members as lecturers	Faculty as creators of learning environments
Tell-Read-Test	Problem-based active learning approaches

WHY USE CLICKERS?

- To *involve* students, and allow for "peer instruction"
- To get students to read before class
- To in effect, learn what's inside your students' heads for a given question
- To offer immediate, real-time feedback to instructor
- To help promote higher class attendance engagement and participation

BY POSING QUESTIONS TO STUDENTS, SEVERAL "GOOD" THINGS HAPPEN…

- Focuses students' attention on (what you, the instructor considers to be) the important ideas;
- Students can test and apply new ideas gleaned from recent lectures or readings;
- Allows students to build or make connections between ideas or representations;

A FEW MORE GOOD THINGS…

- Students can use them to analyze a (new) situation or context;
- Gets them thinking about how to ask questions (that is, it explicitly models the process of analyzing ideas or conclusions by asking questions and figuring out the answers).
- Directly involves students in the learning process.

STILL MORE GOOD THINGS?

Gets them
talking, sharing, discussing, debating, refining, defining, eliciting,

participating.

READING YOUR STUDENTS

Clickers can tell you when students are disengaged and/or confused, and are a useful tool in letting you know that they might need to have the concept posed differently.

BEST TYPES OF QUESTIONS?

- focus on concepts the instructor feels are particularly important
- involve challenging ideas with multiple reasonable answers
- reveal student confusion
- generate spirited student discussion.

SEVEN PRINCIPLES-

SIMILAR BENCHMARKS

Chickering and Gamson (1987) identified seven principles of good practice in undergraduate education:

Encourage student-faculty contact

Encourages cooperation among students

Encourages active learning

Gives prompt feedback

Emphasizes time on task

Communicates high expectations

Respects diverse talents and ways of learning

(1991) **Adapted from:** Chickering and Gamson's book:
"Applying the Seven Principles for Good Practice in Undergraduate Education"

ONE FACULTY'S OPINION…

Principles of Biology; 3 hour long classes

Large lecture sections, (75 students); 2 smaller classes of 25

THE TECHNOLOGY IS NOT THE PEDAGOGY…

Using Clickers in the Hybrid Classroom: Methodology

Assign pre-recorded lectures to watch at home; provide students with the lecture notes or PowerPoint slides.

Allow students to bring in a page of handwritten notes to class to use in aid of their discussions and quiz responses.

Team them up in pairs of 2 or groups of 4.

Either give each student his/her own clicker or offer up one per team.

Use clicker questions to discuss problem sets and apply real world application to the readings.

Listening to the student discussions as they deliberate will allow you to much better understand and address student thinking and misconceptions.

KEEP THE MYSTERY GOING!

USE STUDENTS' CURIOSITY TO DRIVE THE DISCUSSION

Keep the polling results under wraps till they've '**had a chance to work it out.**'

Keep them thinking about the question and **have them defend their answers.**

Allow them **to imagine why a student would have chosen a different answer**. (This answer is tempting… why might someone have chosen Y?)

A common mistake is to use clicker questions that are too easy. *Students often learn the most from a question that they get* ***wrong*** *so it's important to know they are most useful as a diagnostic tool, and for increasing their motivation to read and relate to the topics, not as a punishment!*

HOW CAN I ASSESS MY USE OF CLICKERS?

- Use them to address misconceptions early
- Ask students informally how the class is going after one use, and three weeks then three months!
- Poll or survey students about their opinions on use of CRS, and how they think it has affected their learning
- Use the response database (i-grader) to do item analysis of your questions, to find out which ones work well or which questions need improvement – which students are struggling and which are acing the questions- match accordingly.

INTRINSIC ('INDIVIDUAL') MOTIVATIONAL FACTORS

- Desire for flexibility
- Desire for convenience
- Desire to become a better teacher
- Desire to provide an interactive experience for students
- Desire for change
- Interest in reaching audiences in new ways

EXTRINSIC ("ORGANIZATIONAL") MOTIVATIONAL FACTORS

(informed by Herzberg)

- Tenure and promotion
- Desire to increase enrollment/revenue
- Desire to maintain enrollment/revenue
- Material incentives for developing online courses/programs
- Professional development
- Emergency preparedness (online vs. onsite)
- Become more productive in doing one's job
- Supportive administration
- Supportive mentors
- Appropriate technological and pedagogical support

FINAL QUESTION:

AFTER VIEWING THIS PRESENTATION I AM LIKELY TO:

A: ASK MY TECHNOLOGY SUPPORT PERSON FOR MORE INFORMATION

B: ASK MY TECHNOLOGY SUPPORT PERSON TO BUY A SET

C: NOT THOROUGHLY CONVINCED BUT AN INTERESTING PRESENTATION

D: THIS WOULDN'T WORK IN MY CLASSROOM/SCHOOL

E: A AND B

QUESTIONS? COMMENTS?

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