

‘Flipped Classrooms’ : Actively Engaging Learning Environments in CPE

World Congress CPE 2016

Jack R. Scott, EdD, MPH & Rob A. Martin, MBA

2016

Winthrop University Hospital; Long Island NY

Stony Brook University, School of Medicine



Disclosures

- We have NONE to report

Active Learning

- Presentations
- Lectures
- Grand Rounds
- Small groups
- Case Studies



What is the point?

The point is...

Recall, Retention!



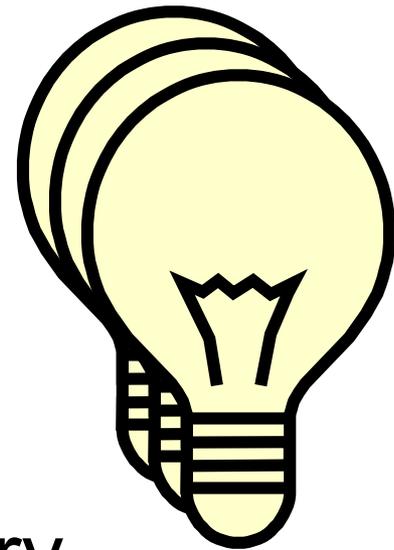
Learning Objectives

Participants will be able to:

- *Describe* effective classroom/lecture instructional methods
- *Differentiate* between passive and active learning in the 'flipped classroom' setting
- *Assess* a variety of active learning strategies (e.g., Team-based Learning, Audience Response Systems, web-based delivery, TBL; etc.)
- *Identify* specific active learning strategies for immediate implementation into participant's professional development curricula.

Group Building: on the spot assessment

- Identify something that you learned that you thought would be hard... but you still remember it.
- How did you learn it?
- Reflect and be prepared to present a summary

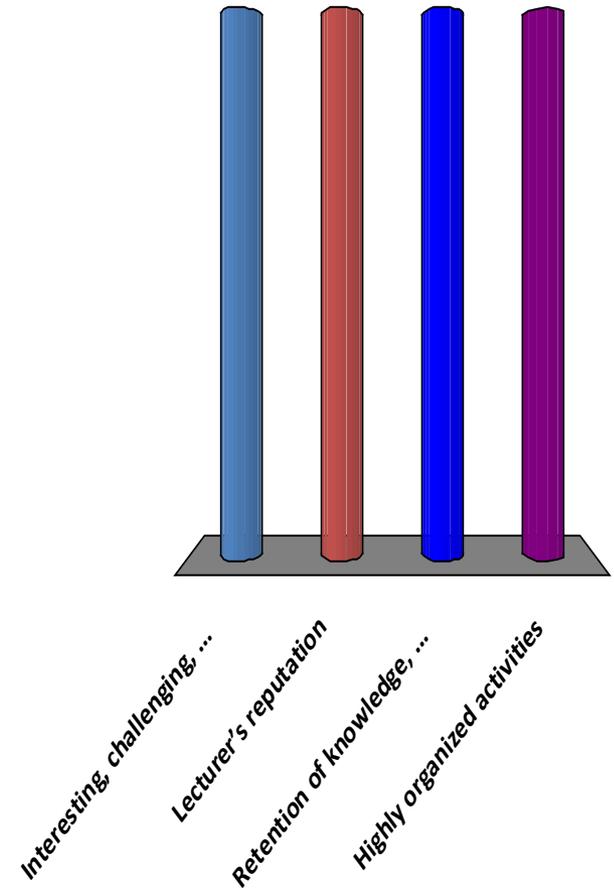


What characterizes an effective lecture or presentation in the classroom setting?

ARS Quiz Effective classroom

presentations are best characterized by:

- A. Interesting, challenging, relevant topics 25%
- B. Lecturer's reputation 25%
- C. Retention of knowledge, skills 25%
- D. Highly organized activities 25%



Glassick's Criteria

- **Clear learning goals**
- **Adequate preparation**
- **Appropriate teaching methods**
- **Significant learning results**
- **Effective presentation**
- **Reflective critique for improvement**

Glassick, Huber & Maeroff (1997)

Start with the *End* in Mind

- Consider the extent of your audience's prior knowledge and experiences.
- Tailor the breadth and depth of your content to meet learner's needs in the time you have.
- Know what essential information you want your learners to leave with for routine practice.

Goals & Objectives

- Cognitive (knowledge) to: write, define, repeat, name, list, recall, explain, locate, identify
- Behavioral (skill) to; use, apply, perform, manage, design, prepare, evaluate, measure, appraise
- Affective (desire to use the skill) to: assists, recognizes, leads, initiates, values

By the completion of this session, participants will be able to.....

Watch this: What is the goal? How does he know if students got it?

March (2:17)

<http://www.youtube.com/watch?v=r9-uIRZZR40>

(Dead Poets Society)

Actively reinforcing didactic teaching (lecture)

- Invite learners to prepare questions to submit for the teacher's response (or provide a list that they select from)
- Pose a case-study problem for learners to solve based on learning from the lecture
- Ask learners to review the lecture in a group and commit major points to memory-give them a self-scoring test
- Ask learners to summarize the learning using experiential methods (role play, simulation, experience, writing, demonstration)

Flipped Classroom

- Self-directed learning --- anytime, anyplace
- Pre-reading – “Being ready to learn”
- Synchronous learning – webinars, web-based audio seminars, video-conferencing (Adobe Connect)
- Asynchronous learning – email, Moodle instructional delivery (Discussion Forums)
- Web-based learning modules – course webpage (curriculum, case studies, study aides – Flashcards, videos), iTunes University, Google+, Khan Academy, youTube, podcasts, digital media

Interactive Teaching Strategies

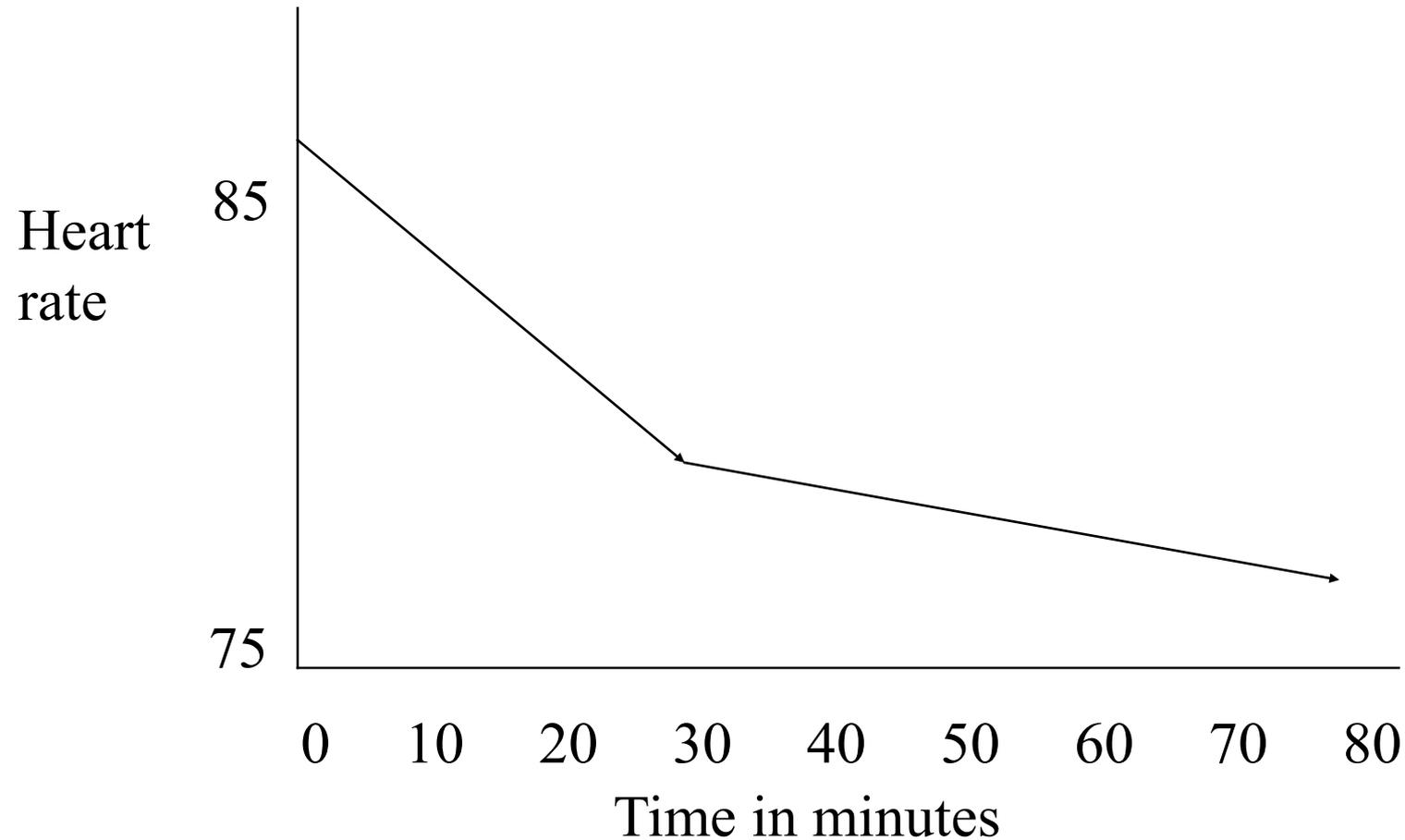
- ARS 'clickers'
- Team-based Learning
- Think-Pair-Share
- Simulation
- Case studies
- Questions – higher order
- Videos and demos
- Quizzes
- Wait time – 'wait, wait, don't tell me'
- Handouts
- Electronic instructional delivery

More Active Learning Strategies

- Stories, cartoons, images
- Present a problem to be solved (not just case problem)
- Present questions/quiz PRIOR to lecture that audience can listen to answer
- Use real life illustrations
- Ask audience for examples in their own lives
- Have students prepare quiz questions
- One minute free write



Maintaining Attention



Long Term Memory

- Takes about 30 minutes to consolidate
- Surface learning: memorization of facts
- Deep learning:
 - make connections and links;
 - establish relationships between facts, concepts, pre-existing information;
 - Meta-cognitive formation in critical thinking
 - Retention of knowledge, skills, attitudes

Student-centered Teaching Practices (2005-08)

- Small group, cooperative learning > 48 to 59%
- Student peer evaluations >16 to 24%
- Reflective writing > 18 to 22%
- Short answer exams > 37 to 46%
- Didactic lecturing < 55 to 46%

N= 22,562

UCLA Study “The American College Teacher” (Chronicle Higher Education, 2009)

Best Presentation Practices

- 30 minute lecture
- Simple graphs and visuals
- Readable text – 28 font size Times New Roman, with 7 points/slide
- One slide per minute
- Eye contact and alternate voice rate
- Enthusiasm – smile
- Content knowledge is vital

Activity: assessment

- Write on the card one active learning technique you have used in your teaching
- Pass the cards clockwise
- Make a check if you have used this technique
- Keep going until you have your own card back

Team-based Learning

TBL- Instructional strategy to enhance active learning and critical thinking even in large basic science or other large group teaching environments (e.g., Grand Rounds; Case Conference, etc.).

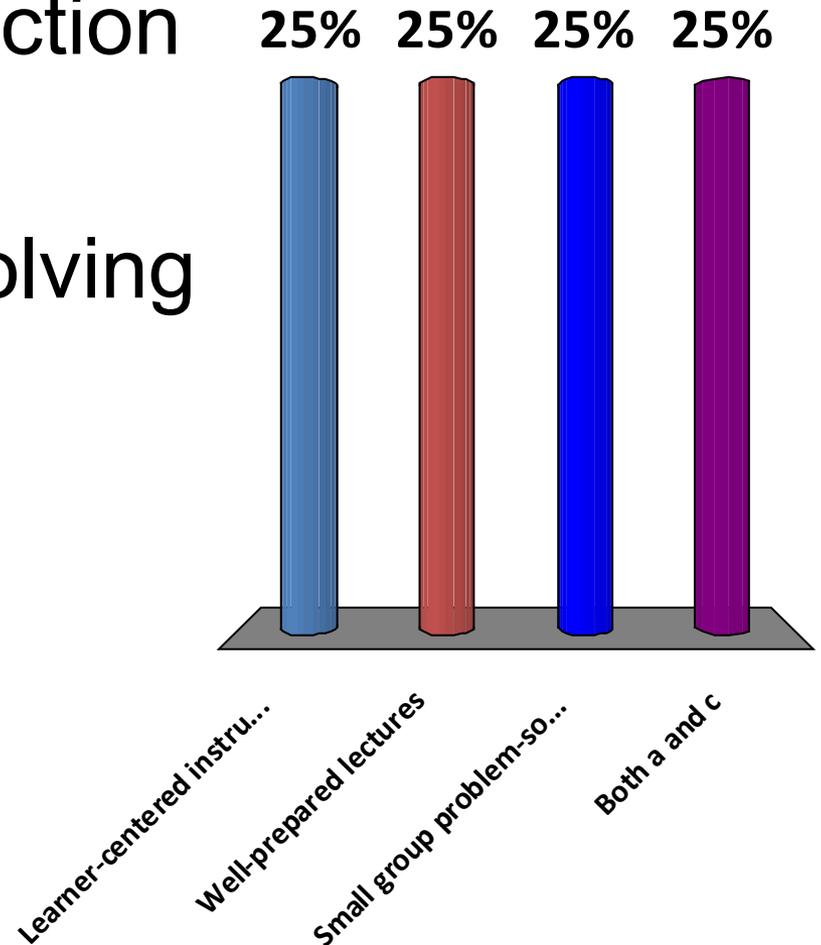
Team-Based Learning

- Fosters individual knowledge and accountability to a sub-group (team) of learners who collaboratively compete for correct medical science knowledge content and concept acquisition.
- Pre-reading article; Individual Readiness Assurance test (quiz, MCQ's) and Group Readiness Assurance Test to refine knowledge and concepts. IRATS, GRATS

Active Learning Quiz

Active learning includes which of the following?

- A. Learner-centered instruction
- B. Well-prepared lectures
- C. Small group problem-solving
- D. Both a and c



Defined Features Matrix

Worksheet #1

Defined Features Appraisal

Think-Pair-Share

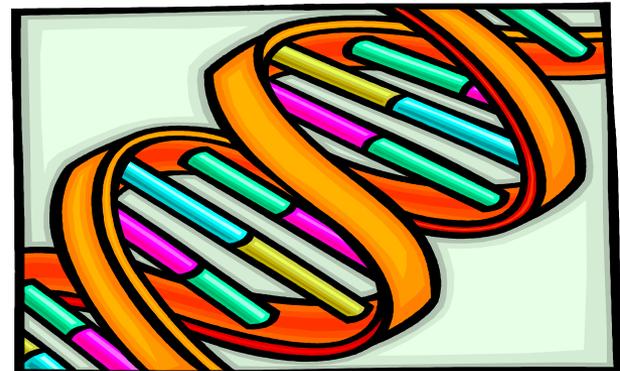
Examine these active learning features and rate the pro's (+) and con's (Δ) for each.

Share with a partner to compare findings.

You have 5 minutes. *Thank you.*

Think outside of the box

Your task: Come up with a plan to teach “sepsis prevention” in a way you think the learner will remember long after today.

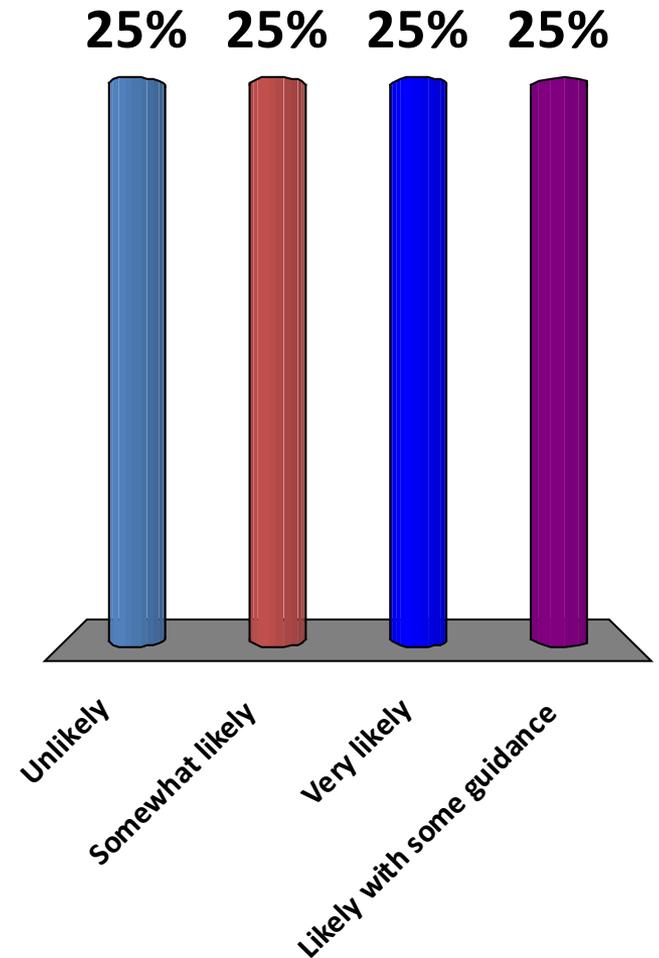


Try it again...with structure!

- Teach: Sepsis Prevention (hospital acquired)
- Define your goal
- Assess learner's prior knowledge
- Pair down the content to match the goal
- Decide the best (out of the box) way to deliver while meeting the goal
- Assess: How will you know if they “got it?”

How willing are you to include a 'flipped classroom' learning environment?

- A. Unlikely
- B. Somewhat likely
- C. Very likely
- D. Likely with some guidance



Levels of Use Appraisal

What is your current *level of use* to adopt active learning strategies?

1. Orientation (want to learn more)
2. Preparation (plan to use)
3. Mechanical (making changes, applications)
4. Routine (established pattern of use)
5. Refinement (measuring change and outcomes)

Case Study

Worksheet #2

THINK-PAIR-SHARE

Kindly take 5 minutes to consider the Case Study or one of your choosing (current or proposed instructional unit). You may work in pairs.

Worksheet De-briefing

Describe your goals/objectives and selected active learning methods.

Why did you select these?

How will you measure learning outcomes?

One-minute Paper

What were your 'muddiest points' or concepts that lacked sufficient clarity in our session?

1. _____

2. _____

3. _____

Key Points:

- Preparation that meets learner's needs
- Learning objectives to guide learning & instruction
- Introduction (ready to learn)
- Content with learning interaction- 'flipped classroom'
- Outcomes measures, assessment

Post-session Questionnaire

THANK YOU!!!!

jrscott@winthrop.org

ramartin@winthrop.org

References

- Acad Med (2014) 89, 2: 236-43
- Med Teach (2007) 29, 1:38-42
- Am J Obstet Gynecol (2005) 193, 5: 1827-30
- Jrnl Hi Ed (2005) 76, 5: 570-01
- Teach Learn Med (2001) 13, 1: 43-8
- The Teaching of Learning Strategies (1996) Weinstein, Mayer. New York : Macmillan
- Taking Charge of Change (1987) Hord, Rutherford, Huling-Austin and Hall. ASCD
- Jrnl Cont Ed Health Prof (2015) 35 (S1): S35-9.

WORKSHEET #2

Active Learning Case Study

Take five minutes to analyze this Case Study and be prepared to share with the larger group. You may pair with your partner as a THINK-PAIR-SHARE. Thank you!

Case Study

You are a CME Program Director anticipating 50 clinicians to attend your upcoming CME course and wish to improve learning outcomes for knowledge and clinical decision-making. Many of these attendees have commonly complained about the passive nature of current didactic learning sessions and their lack of engagement or collaboration. You attended the World Congress conference workshop on Active Learning Strategies in the Flipped Classroom. Part of your strategic plan is to redesign classroom, conferences into a 'flipped classroom' learning environment. Using the concepts in the World Congress workshop, how will you proceed for a planned or hypothetical course?

Goal (What is overall purpose for active learning in your course?):

Learning Objectives (How will your course achieve this goal?):

- 1.
- 2.
- 3.

Activities (Identify active learning methods you will consider. This may include learning outcome assessment methods for knowledge and skills such as Board exam preparation quizzes; QI measures; Clinical Teaching strategies; Constructive Feedback; etc.

Select and rationalize at least three (3) active learning methods.

- 1.
- 2.
- 3.

World Congress 2016

Worksheet #1

THINK-PAIR-SHARE

Rate each of these active learning methods and share with your partner. You have 5 minutes. Thank you!

Defining Features Matrix

Distinguish different in-class active learning features by rating their High or Low value:

HIGH

LOW

NEUTRAL

Features: Pro's (High value) Con's (Low value) Neutral			
Audience Response System			
Think-Pair-Share			
Small Group case study			
Videos and Demonstrations			
Role-Play			
Small-scale Simulation			
Team-based Learning			
Other (specify:)			

Flipped Classrooms: Actively Engaging Learning Environments in CPE
World Congress Conference
2016

Pre-Session Questionnaire

DIRECTIONS: For each item, please use the scale below and circle the letter that best corresponds to your response. Please do not dwell on any items. Kindly mark your first response to important issues and methods in our Workshop.

Definitely No < A-----B-----C-----D-----E > Definitely Yes

In your role as an academic leader, to what extent are you confident in your ability to do each of the following?

- 1) Organize efforts that optimize active learning environmentsA B C D E
- 2) Describe activities to design active learning pedagogyA B C D E
- 3) Implement ‘flipped classroom’ instruction.....A B C D E
- 4) Assess active learning strategies that improve knowledge retention and self-efficacyA B C D E
- 5) Measure change in learning outcomes.....A B C D E

Preparatory Reflection

When you think about active learning, what are your teaching strengths? (Please be specific).

- a) _____
- b) _____

As we begin, what concerns you most about active learning? :

Flipped Classrooms: Actively Engaging Learning Environments in CPE
World Congress Conference
2016

Post-Session Questionnaire

DIRECTIONS: For each item, please use the scale below and circle the letter that best corresponds to your response. Just mark your first response to important issues and methods in our Retreat.

Definitely No < A-----B-----C-----D-----E > Definitely Yes

In your role as an academic leader, to what extent are you confident in your ability to do each of the following?

- 1) Organize efforts that optimize active learning environments A B C D E
- 2) Describe activities to design active learning pedagogy..... A B C D E
- 3) Implement ‘flipped classroom’ instruction A B C D E
- 4) Assess active learning strategies that improve knowledge retention and self-efficacy. A B C D E
- 5) Measure change in learning outcomes A B C D E

Please use the same response scale above for the following items to give us feedback about the effectiveness of today’s workshop session. .

- 1) The workshop activities were effective in meeting its learning objectives..... A B C D E
- 2) The content was relevant to my instructional role A B C D E
- 3) The materials used in the workshop enhanced my adoption of active learning practices ... A B C D E
- 4) Overall, the workshop was a valuable professional development experience A B C D E
- 5) What are your suggestions for improving today’s session? (Please be specific.)

Future topics of interest: _____

Please return and Thank you! JR Scott& RA Martin