

Flipping the Classroom: A Pedagogical Approach to Maximize Student Learning

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Objectives

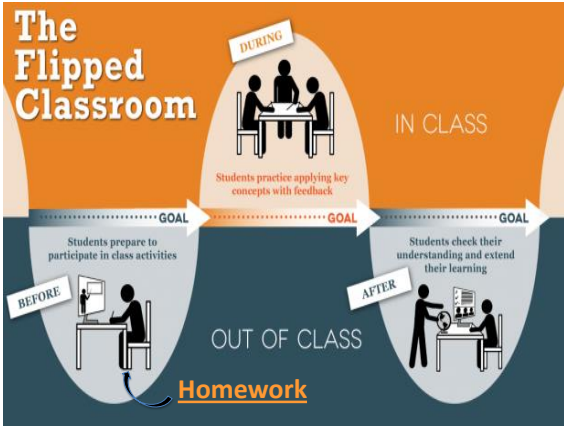
- Evaluate the need for student-centered learning and teaching techniques
- Demonstrate the process of planning and implementing the 3 phases of the “flip”
- Discuss the challenges and opportunities of the implementation of the flipped classroom (FC)

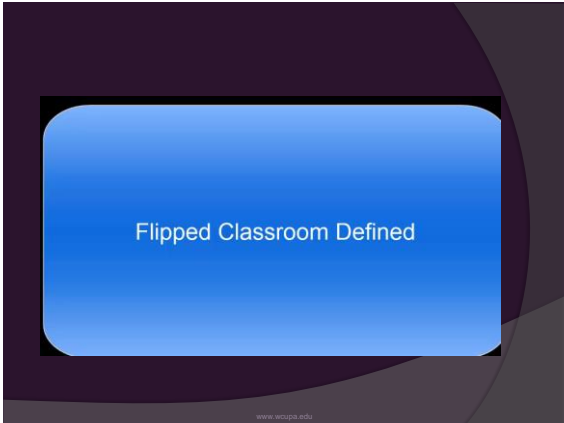


Literature

- Health professions classroom needs to change¹
- FC is not new and revolves around active learning^{2,3}
- Allied health professions research regarding approach.⁴⁻⁸



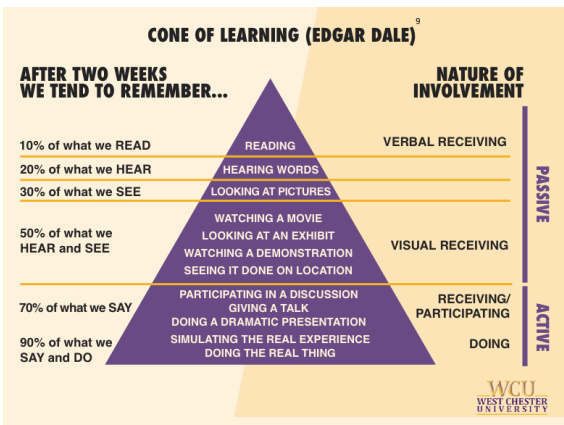










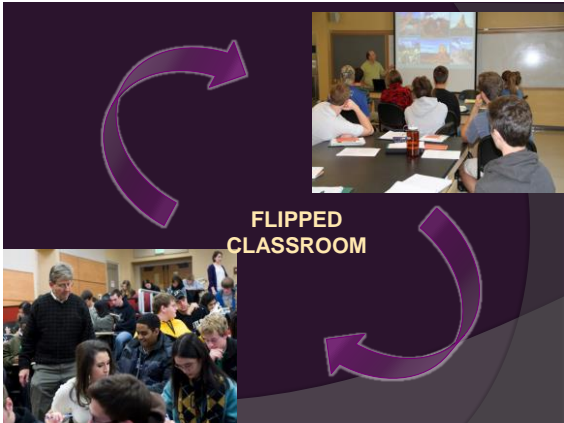


Applying Bloom's to Flipping

Traditional Class

Flipped Class





Millennial Learners (1981-1996)

10



Planning Tool for the "Flip"

Topic: Chronic Lower Leg Injuries			
Students will be able to:			
<ul style="list-style-type: none"> Discuss how specific chronic lower leg injuries can be prevented. Explain the process for evaluating these injuries. Identify specific chronic injuries that occur in the lower leg region and discuss plans for management 			
	Before Class (online) TUESDAY	During Class (face-to-face) THURSDAY	After Class
Activities:	Read- Craig Article Read Text- pgs. 532-545 Watch Videos Complete "Ticket-in" assignment	Clicker Questions Mini-Lecture Think-Pair-Share using cases	Problem Based Learning
Assessments:	Ticket-in	Clicker Questions Think-Pair-Share Report Out	Written Exam Practical Exam

BEFORE CLASS

DURING CLASS

AFTER CLASS

Topic: Chronic Lower Leg Injuries	
Students will be able to:	
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	Before Class (online) TUESDAY
Activities:	Read- Craig Article Read Text- pgs. 532-545 Watch Videos Complete "Ticket-in" assignment
Assessments:	Ticket-in

Helpful Hints- Before Class

- Have a plan
- Students are digital natives
 - Tutorials are necessary
- Basic understanding of how to use technology
 - Screen capture software
- Chunking of videos
 - Screen capture software



Resources for Before Class

- Screencasting software
- Richard Mayer's¹¹ principles for multimedia learning
 - Segmenting
 - Coherence
 - Redundancy
 - Signaling



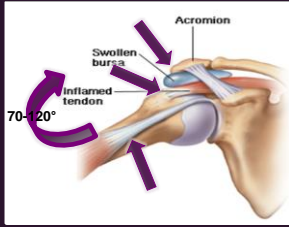
Example Using Mayer's Principles

Impingement

- S&S
 - "diffuse" pain around the acromion
 - painful arc—between 70° & 120°
 - unable to sleep on involved side
 - TTP greater tubercle OR Long head biceps OR ant. Lat. Edge of acromion.
 - GIRD may be present
 - potential + tests:
 - drop arm
 - empty can
 - Neer shoulder impingement
 - Hawkins Kennedy
- stages of impingement syndrome—management—restrict motion; standard acute, rehabilitation, must look at role of scapula and know what is impinged!!!



Example of Mayer's Principle:

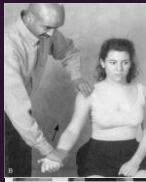


- Impingement
- Signs and Sx
- Observations
- Palpations
- Special Tests
- Treatment

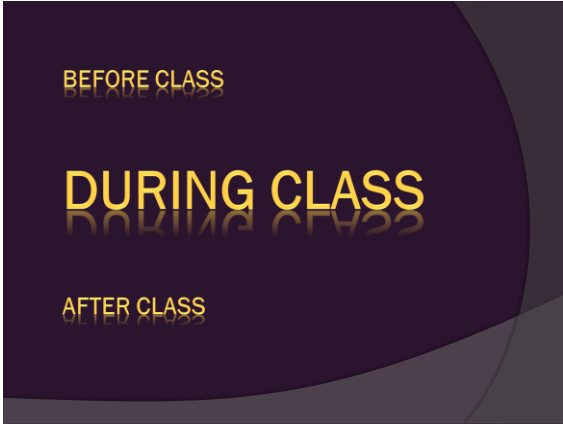


Shoulder impingement tests

- Neer test (1): [Neer's Test](#)
- Hawkins-Kennedy test (2): [Hawkin's Kennedy Test](#)
- Speed's Test (3): [Speed's Test](#)
- Empty Can (4): [Empty Can Test](#)







Topic: Chronic Lower Leg Injuries			
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		During Class (face-to-face) THURSDAY	
Activities:		Clicker Questions Mini-Lecture Think-Pair-Share using cases	
Assessments:		Clicker Questions Think-Pair-Share Report Out	


Helpful Hints for During Class

- Avoid cognitive overload
- Be consistent
- Hold students accountable

FORMAT FOR CLASS

- Burning questions: 5 min
- Check for Understanding: 10
- Mini-Lecture: 10
- Think-Pair-Share Group Work: 15
- Group Presentations: 25
- Burning Questions: 10


SMD 312
FLIPPED CLASS
Shoulder Instabilities




Resources for During Class

Techniques

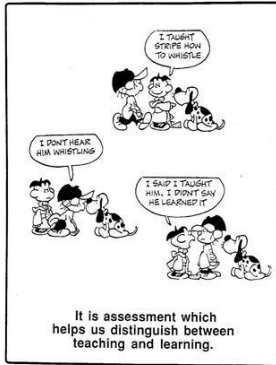
- Individual
 - clickers
- Question and Answer
 - Fishbowl
- Share/Pair
 - Think-Pair-Share
- Cooperative Learning
 - Jigsaw



I hear, and I forget
I see, and I remember
I **do**, and I understand.
- Confucius



AFTER CLASS



Topic: Chronic Lower Leg Injuries	
Students will be able to:	
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Activities:	
Assessments:	After Class Problem Based Learning Written Exam Practical Exam

Formative and Summative Assessment

Formative Assessment

Assessment during any point of the learning process.

EXAMPLE- One Minute Paper, Muddiest Point, Clicker Questions.

Summative Assessment

Assessment of knowledge after learning has ended.

EXAMPLE- Exam, Paper, Presentation.

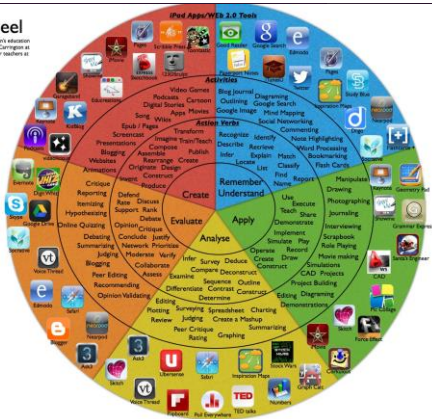
Helpful Hints- After Class

- Not everything has to be assessed in summative ways
- Think of creative ways to get the information you want to demonstrate student learning
- Make it a regular part of your daily work



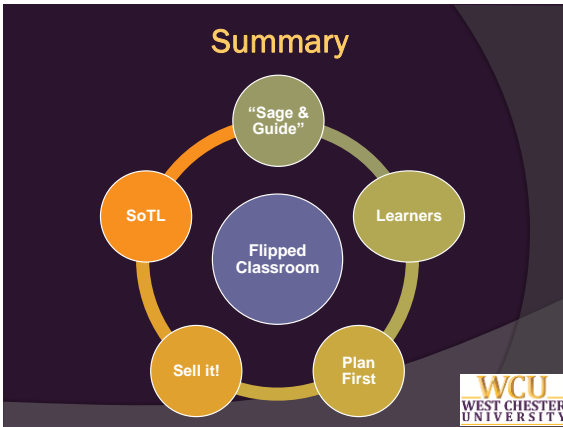
iPadagogy Wheel

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What my students liked least...

	How I fixed it
"Couldn't ask questions during lecture"	<ul style="list-style-type: none">Set up discussion board with email alerts for "muddy" questions
"Lectures too long"	<ul style="list-style-type: none">Used chunkingReally thought about what I wanted them to know/learn
"Got distracted" & "Difficulty paying attention"	<ul style="list-style-type: none">Aligned Mayer's principlesQuestions interspersed in lectureAsk thinking questions
"Requires a lot of motivation"	<ul style="list-style-type: none">Stress importance of independence



SO WHAT?

NOW WHAT?

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