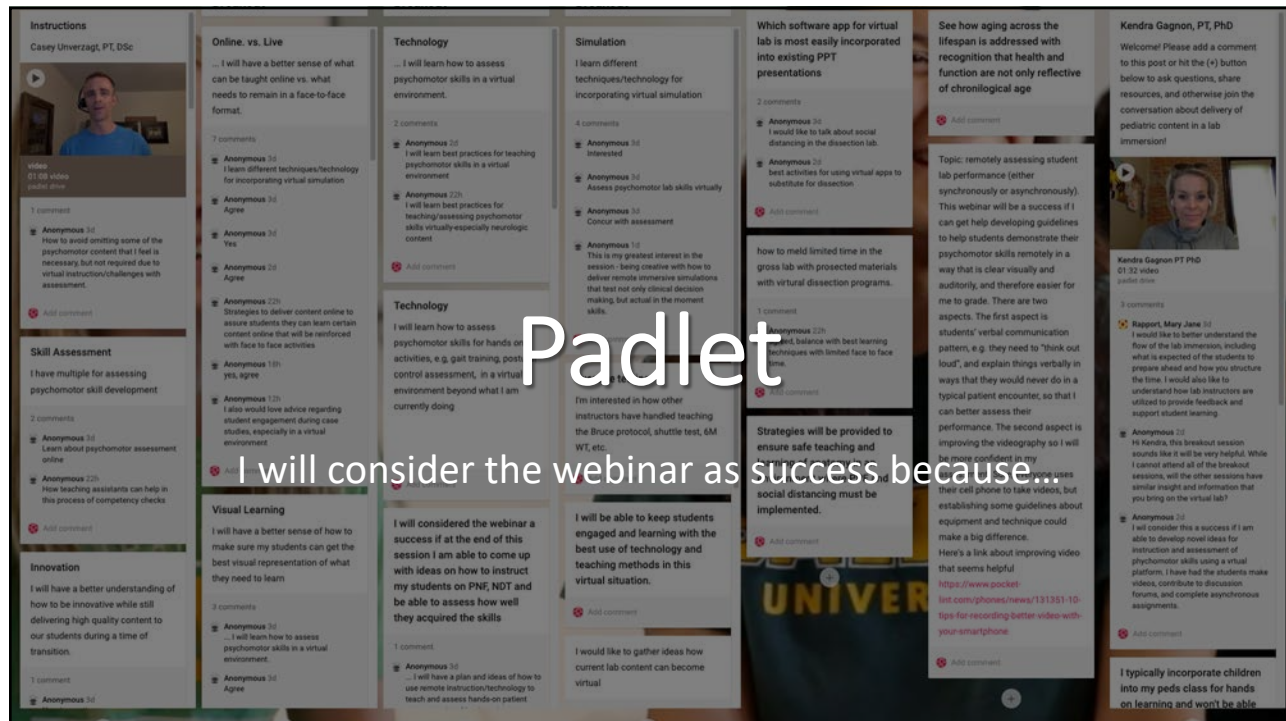


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Let's Set the Stage

1. Hybrid learning with immersive lab experiences is one of many educational models.
2. All program designs have the potential to thrive after COVID.
3. We are here to help everyone learn from our challenges and successes.

2



3

ACCEPTED MANUSCRIPT



Doctor of Physical Therapy Education in a Hybrid Learning Environment: Reimagining the Possibilities and Navigating a “New Normal”

Kendra Gagnon □, Brian Young, Teresa Bachman, Thomas Longbottom, Richard Severin, Michael J Walker

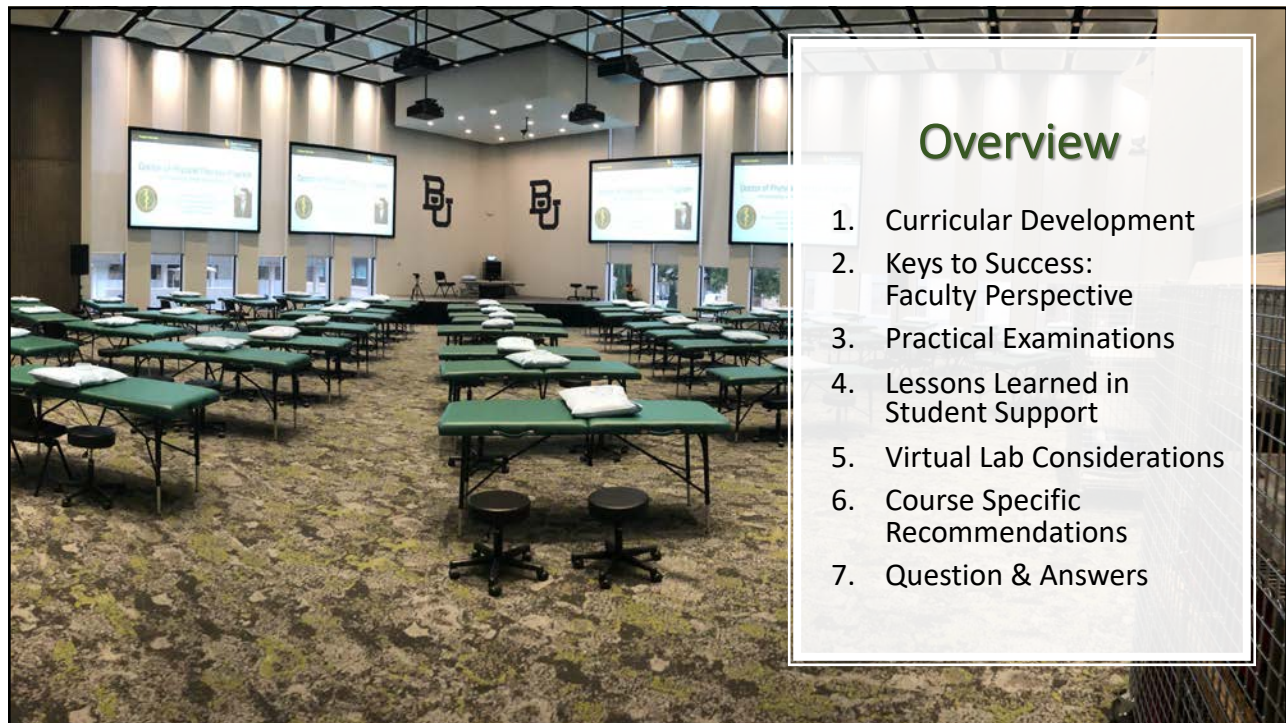
Physical Therapy, pzaa096, <https://doi.org/10.1093/ptj/pzaa096>

Published: 18 May 2020 Article history □

Hybrid Learning: The Big Picture

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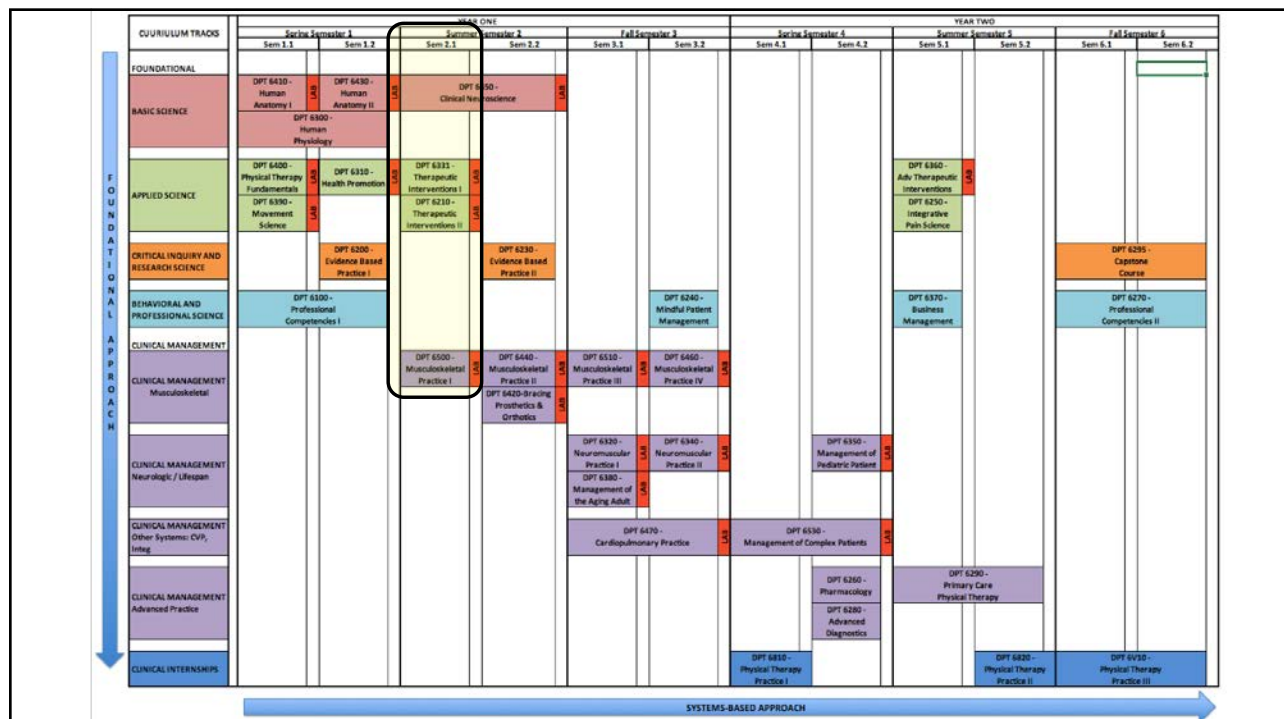
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Baylor DPT Hybrid Curricular Model

January	February	March	April	May	June	July	August	September	October	November	December
Semester 1				Semester 2				Semester 3			
Minimester 1.1	Lab	Minimester 1.2	Lab	Minimester 2.1	Lab	Minimester 2.2	Lab	Minimester 3.1	Lab	Minimester 3.2	Lab

January	February	March	April	May	June	July	August	September	October	November	December
Semester 4				Semester 5				Semester 6			
8-week Clinical Experience		Minimester 4.2	Lab	Minimester 5.1	Lab	8-week Clinical Experience		15-week Clinical Experience			

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COVID-19 Landscape – Transitioning from here....

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 - 9:00		Neuroscience	Neuroscience		Neuroscience
9:00 - 10:00	Physical Agents	Neuroscience	PA Lab	PA Lab	Lab
10:00 - 11:00	Physical Agents	Lab	PA Lab	PA Lab	Lab
11:00 - 12:00	Ther Interv	Ther Interv	Ther Interv	Ther Interv	Ther Interv
12:00 - 1:00					
1:00 - 2:00	Ther Interv Lab	Ther Interv Lab	Ther Interv Lab	Ther Interv Lab	Ther Interv Lab
2:00 - 3:00	MSK 1	MSK 1	MSK 1	MSK 1	MSK 1
3:00 - 4:00	MSK 1 Lab	MSK 1 Lab	MSK 1 Lab	MSK 1 Lab	MSK 1
4:00 - 5:00	MSK 1 Lab	MSK 1 Lab	MSK 1 Lab	MSK 1 Lab	OFF

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...to sustained online coursework...

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 - 9:00		Neuroscience	Neuroscience		Neuroscience
9:00 - 10:00	Physical Agents	Neuroscience			
10:00 - 11:00	Physical Agents				
11:00 - 12:00	Ther Interv	Ther Interv	Ther Interv	Ther Interv	Ther Interv
12:00 - 1:00					
1:00 - 2:00					
2:00 - 3:00	MSK 1	MSK 1	MSK 1	MSK 1	MSK 1
3:00 - 4:00					MSK 1
4:00 - 5:00					OFF

all lectures online, or...

...mix of synchronous and asynchronous content

Week Day	MSK 1	Physical Agents	Therapeutic Interv	Neuroscience
M	6 contact hours/wk	2 contact hours /wk	4 contact hours/wk	Sync 2 pm
T				
W				Sync 2pm
Th				
F				Sync 12pm

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...culminating in successful immersive, blocked labs!

	Monday	Tuesday	Wednesday	Thursday	Friday	Weekend	Monday	Tuesday	Wednesday	Thursday	Friday	Weekend	Monday
8:00 - 9:00													
9:00 - 10:00	Ther Interv Lab	Ther Interv Lab	Ther Interv Written and Practical Exam	Phys Agents Lab	Phys Agents Lab		PA Written and Practical Exam	MSK 1 Lab	MSK 1 Lab	MSK 1 Lab	MSK 1 Lab		MSK 1 Lab Practical Exam
10:00 - 11:00													
11:00 - 12:00													
12:00 - 1:00						OFF						OFF	
1:00 - 2:00													MSK 1 Final Exam
2:00 - 3:00	Ther Interv Lab	Ther Interv Lab	OFF	Phys Agents Lab	Phys Agents Lab		MSK 1 Lab	MSK 1 Lab	MSK 1 Lab	MSK 1 Lab	MSK 1 Lab		
3:00 - 4:00													
4:00 - 5:00													

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ACAPT: Planning a Lab Immersion

Drivers



Extended time out of lab and need to “catch-up”



Minimize the amount of “contact” time between students



Meet state & university social distancing requirements



Maintain quality in all course content

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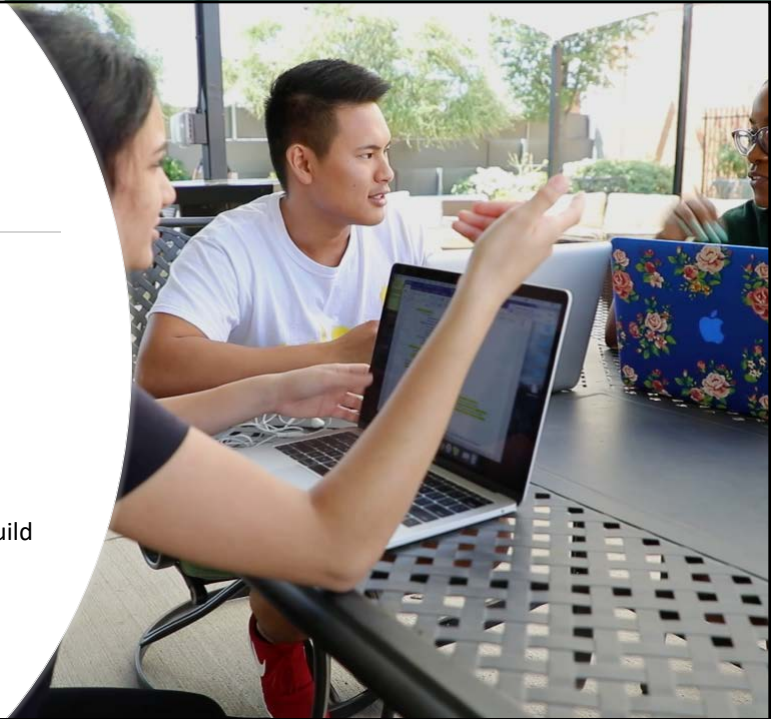
Preparing Curriculum for Lab Immersion

Curricular Efficiencies: What themes carry forward?

- Clinical Reasoning process
- Standard documentation format
- Basic skills used across all courses

Expect Student Integration

- Progressively expose content and build depth across successive courses.



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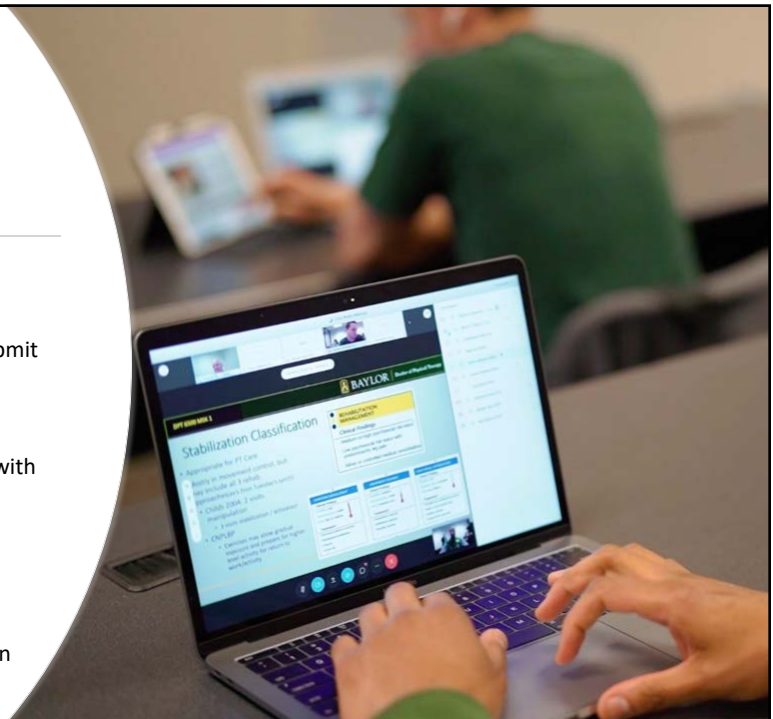
Preparing Curriculum for Lab Immersion

Explore and move all available content to “classroom”

- Practice interviews via Facetime and submit written patient interview/S: notes
- Watch case videos and answer clinical reasoning questions
- Practice techniques from prior courses with application to current content, such as goniometry, exercise, neuro exam

Use classroom to introduce content and techniques

- Lab is for hands-on practice and integration



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Reimagining Lab Content

	Week	Online Course Interactive Content	Online Lab Components, (either interactive sync or student driven asych)	Content that must be completed in immersive lab (list)
MSK I	1	Case Review and CR Framework	Practice Neuro Exam ; ROM/MMT instruction w/Bongo upload for demo; interactive sessions for stabilization, centralization, traction, Lx mobility exercises, hip therex, Hip OA mgt, Hip FIA.	Full hands-on exam instruction/practice, all thrust/non-thrust MT skills from checklist; short sessions for integration of exercise or manually-assisted corrections; integrate skills into pt management scenario, skills practical.
	2	Patient Interview and write up		
	3	Objective Exam and CR Framework --	Student equipment needs: plinth or mat, TB from PT Kit, Neuro exam tools, large goniometer, fluid goniometer, stretch strap.	
	4	"		
	5			
	6	2 Minute Drill		
Clin Neuro	1		Session based around elements of neuro exam relevant to where we are in the course - somatosensory, motor, cranial nerve testing, maybe ASIA testing (would give opportunity to do strength testing and compare to standard manual muscle testing). This would be virtual small group work. Each Group member researches and practices a testing procedure. Then they come together and each member demonstrate and teaches their component to the rest of the group. Finish with each member doing all the skills at once, non-graded peer assessment (with form).	Practice neuro screen.
	2	Case application somatosensory testing	Hands on neurological examination from start to finish- sensory, motor, coordination, proprioception, postural control, cognition, functional skill/task, gait. etc.	
	3	Case application motor testing		
	4	Case application spinal cord		
	5	Case application on cranial nerves/brainstem		

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Immersive Lab Design Principles



Block labs. Teach 1 course at a time.



Schedule lab blocks for course progression



Introduce skills and build in review sessions throughout each day.



Keep "new" content to absolute minimum; lab is to put hands to sync/async material.



Large group vs small group: Some topics work well for more individualized instruction, or if limited equipment.

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Musculoskeletal Example

Time	Activity	Lead Faculty
8:00 – 8:15	Introduction, Expectations, Safety	Dr. Young
8:30 – 10:00	Lumbo Pelvic Hip (LPH) Physical Examination- Standing	Dr. Young
10:00 – 10:30	LPH Physical Examination- Sitting	Dr. Young
10:30 – 12:00	LPH Physical Examination- Supine	Dr. Young
12:00 – 1:30	Lunch	
1:30 – 2:30	LPH Physical Examination- Supine	Dr. Young
2:30 – 4:50	LPH Physical Examination – Prone	Dr. Young
4:50 – 5:25	Manual Therapy- Supine LumboPelvic Manipulation	Dr. Young
5:25 – 5:30	Wrap-up	Dr. Young

Time	Activity	Lead Faculty
8:00 – 9:30	Round Robin Practice of Previous Material	Dr. Young
8:30 – 10:45	Manual Therapy (Large Group) A. Vertebral P-A (Central / Unilateral) Mobilization B. Sidelying Lumbar Neutral Gap Mobilization, Muscle Energy, & Thrust Manipulation C. Lumbar Closing Mobilization, Muscle Energy, & Thrust Manipulation D. Thoraco-Lumbar Junction Manipulation	Dr. Young
10:45-12:00	Rotation (See below)	
12:00 – 1:30	Lunch	
1:30 – 5:30	Rotations (75 min each – 1 in am / 3 in pm; 5 min break between rotations) A. Stabilization Programs B. Centralization Programs C. Traction Programs D. Lumbar Mobility Exercises	Faculty

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Keys to Success: Faculty Perspective

1. Identify nice to know vs. need to know
2. Vary the delivery
3. Round-robin
4. Military schedule
5. Call in the reinforcements
6. Faculty floaters vs. engagers
7. Interleave practice
8. Keep up the energy
9. Taking care of faculty




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“Nice to Know” or “Need to Know”

Curricular bloat
Experts do the basics well



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Baylor University
ROBBINS COLLEGE OF HEALTH AND HUMAN SCIENCES
Doctor of Physical Therapy

Vary the Delivery


Large Group

Breakouts

Physical Activity

Round Robin

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Round Robin Rotations

Say goodbye to:
"I encourage you to find a new partner!"

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Military Schedule

Start and stop times
Breaks
Cleanliness
Organization



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Call in the Reinforcements

Advantages
Challenges
Quality Control

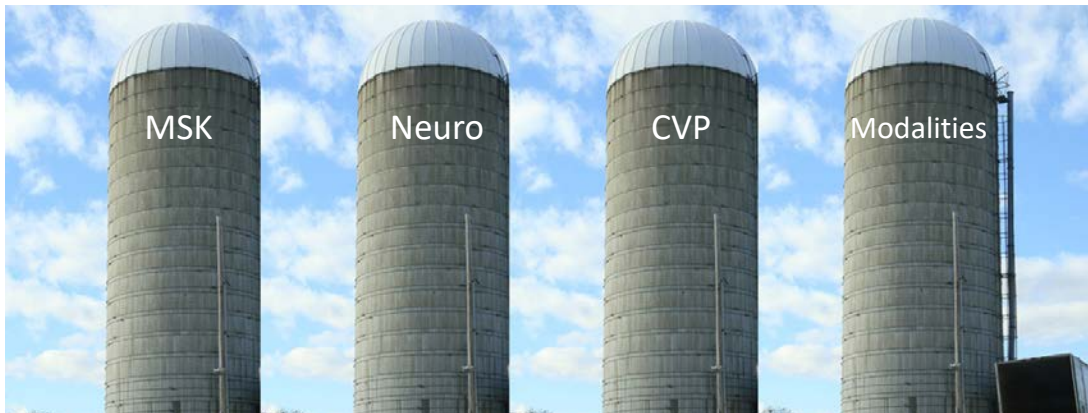


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be.
here.
now.

Faculty Floaters vs. Faculty Engagers

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Blow Up the Silos: Interleave Practice

- Requires intentional coordination amongst faculty
- Strategic implementation
- Address student expectations

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Keep up the Energy



A quality sound system is one of your best investments



Revitalizers

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Taking Care of Faculty

Set expectations early
 Give ample prep time
 Lunch mandatory

Sleep and hydration
 Protect from barrage

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Social Distancing at a Lab Immersion?

Largely dependent on state and University guidelines

Maximum number of people
Travel restrictions
Mandatory quarantines
PPE



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A Note on Social Distancing

- Every Option On the Table
 - Multiple lab sections
 - Extended lab hours
 - Larger venue
 - Regional labs
- Precautions
 - Only work with your roommate
 - Regular temperature checks
 - Masks & PPE

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Practical Exam Considerations

Select a subset of skills to assess the spectrum from your skills checklist

- 2 of each: examination, manual therapy, exercise
- Ask questions during, i.e. contraindications, precautions, definition of positive results, progression of technique based on patient response
- Includes elements of clinical reasoning, professionalism, safety

Student “pairs” can often both be completed within 30 min, including time for rubric completion and brief feedback.

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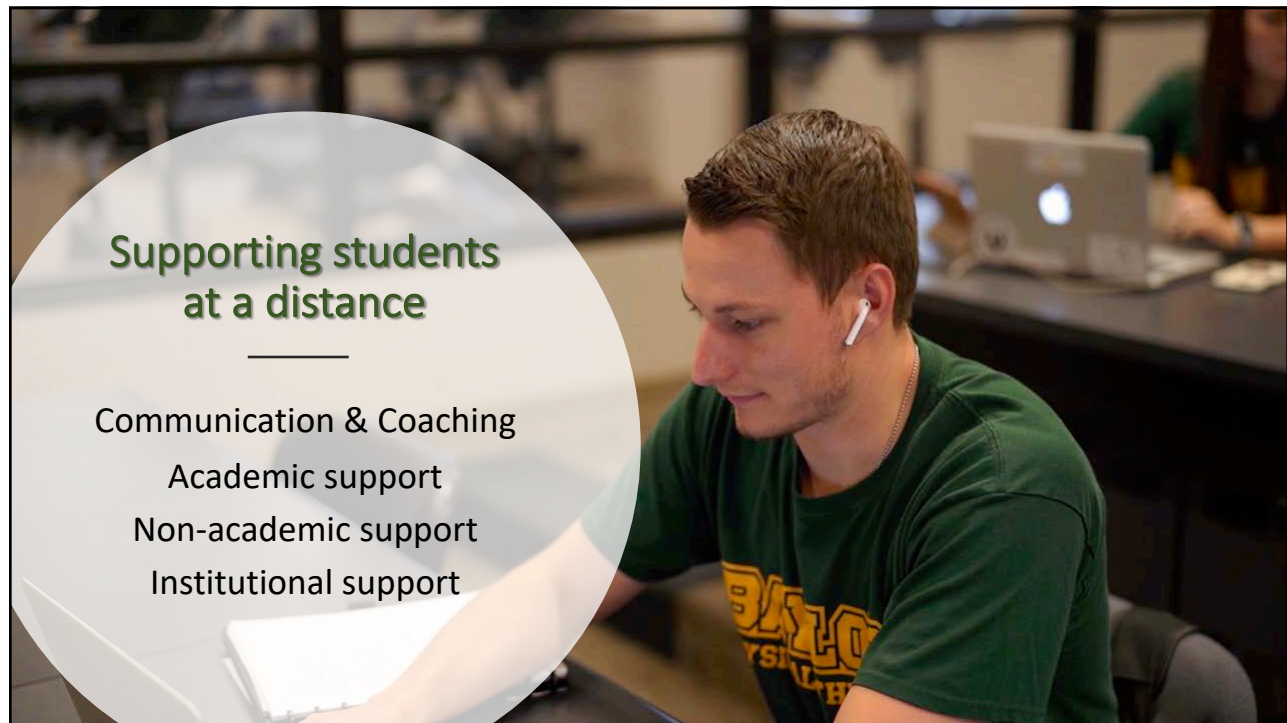
ACAPT: Planning a Lab Immersion

Student Support Doesn't Begin at Lab

**At the program level, we
all work to keep students:**

- Connected
- Tracked
- Coached
- Supported
- Engaged

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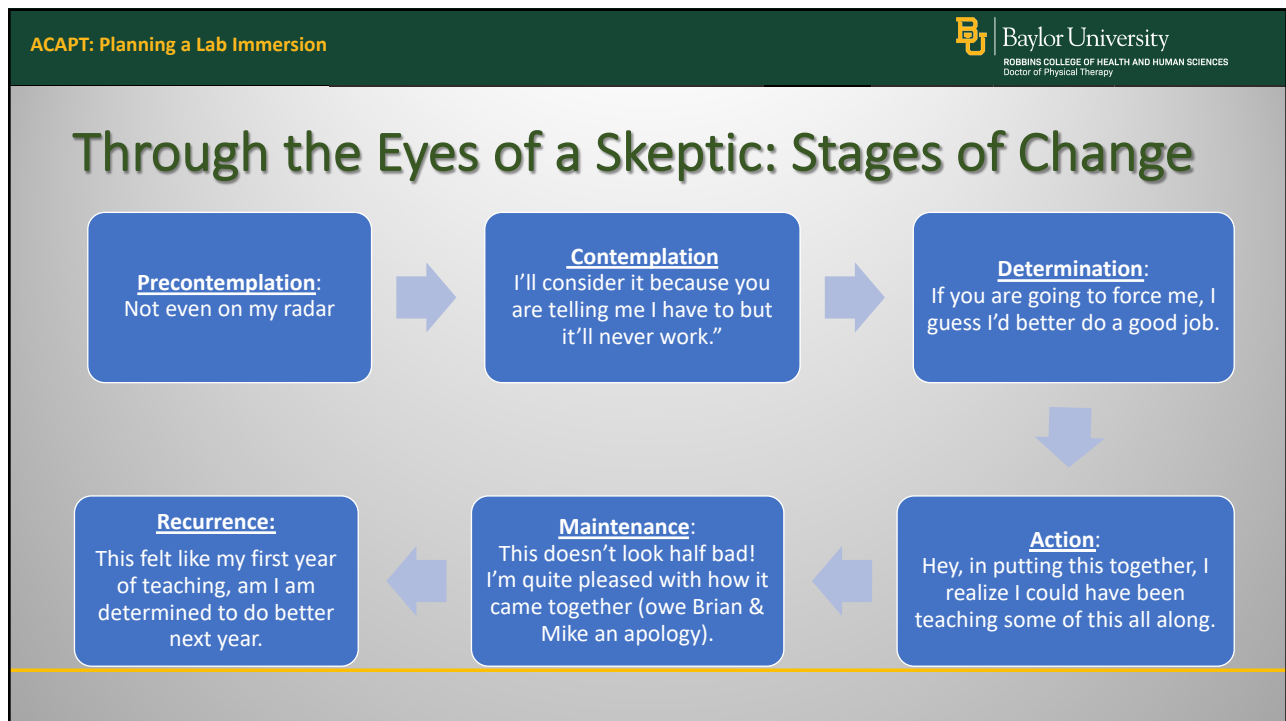
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The Question Isn't "What Can we Move Online?"

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Therapeutic Interventions I: 2019 Lab

Large group instruction

- Principles of manual therapy
- Soft tissue mobilizations
- Neural dynamics

Breakout rotations

- Lower quarter & upper quarter
 - Stretching & ROM
 - Foundations of strengthening
 - Balance (LQ), manual resisted TE (UQ)
 - Plyometrics
- "Core stabilization"
- Functional integration
- Warm-ups & emerging technology

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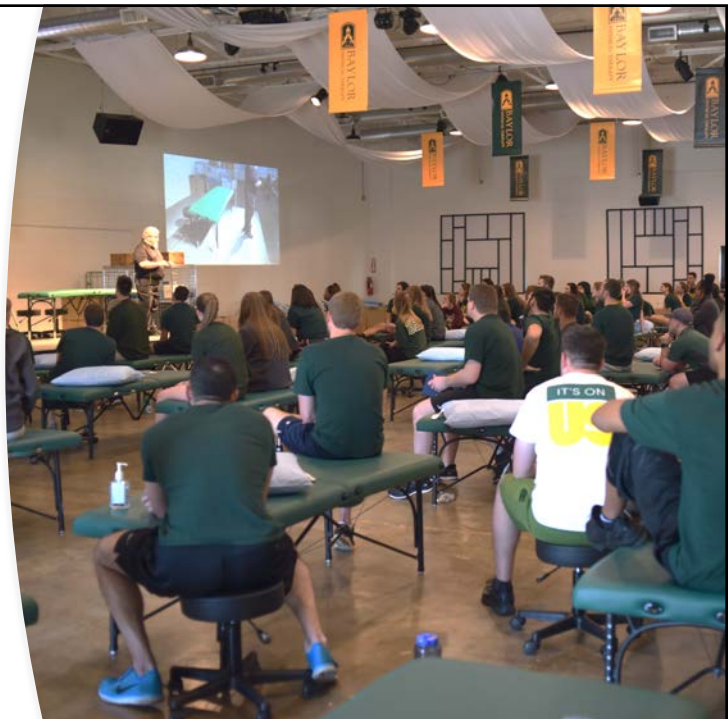
Therapeutic Interventions I: Virtual Lab 2020

Delivery	Time	Topic	Moderator	Equipment	Breakout Instructor
Moderator with focus groups	10:00-10:50	UQ ROM & Stretching	Unverzagt	Household items: list provided	10 faculty
Moderator with focus groups	11:00-11:50	LQ ROM & Stretching	Unverzagt	Household items: list provided	10 faculty
Lunch					
Moderator with focus groups	1:00-1:50	Foundations of UQ Strengthening	Unverzagt	Household items: list provided	10 faculty
Moderator with focus groups	2:00-2:50	Foundations of LQ Strengthening	Unverzagt	Household items: list provide	10 faculty
Breakouts	3:15-3:45	Case application and discussion	Unverzagt/Adams	No equipment needed	10 faculty

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Therapeutic Interventions I: Lab Immersion 2020

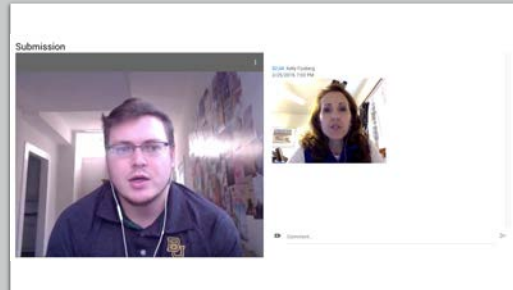
- Review of virtual lab
- Intro to manual therapy
- Plyometrics
- Warm-ups, speed & agility
- Technology in S&C
- Soft tissue-mobilization
- Neurodynamics
- Core training



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Virtual Assessments

- Practical vs. skill check
- Layered case
 - Patient response: normal or abnormal
 - “Show me” what you’ve been doing
 - Demonstration of correct technique
 - How could you progress this individual? Regress?
 - Sets and reps



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Flipgrid: Skill Check

- Therapeutic exercise technique
- Instruct a family member
 - Stage I-III UQ and LQ exercise
 - Soft tissue mobilization



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Virtual Lab: Take Home Message

1. Where are you in the stages of change?
2. Students can still receive individual attention
3. Start by making your list
 - a. Non-negotiables
 - b. "Preferables"
 - c. Why didn't I do this long ago?

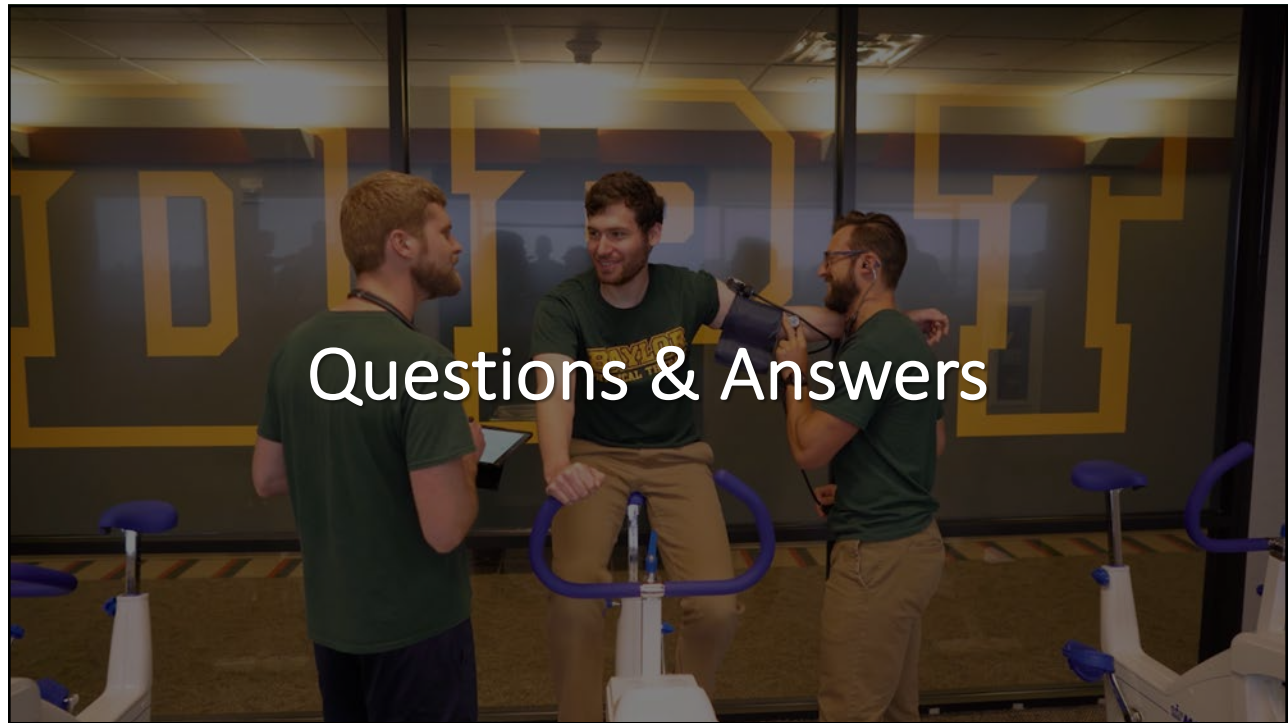
**THINK
OUTSIDE
THE
BOX**

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Lessons from the Trenches: Course Specific Recommendations

Dr. Kyle Adams: Musculoskeletal
 Dr. Cheryl Footer: Neuromuscular
 Dr. Rich Severin: Cardiopulmonary
 Dr. Kendra Gagnon: Pediatrics
 Dr. Teresa Bachman: Aging Adult
 Dr. Louie Puentedura: Anatomy

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