Best Practices for Rethinking lab activities
Pitfalls (Don'ts) - Solutions (Do's) - Practical Examples

Using best practices in distance education, this chart was designed to provide guidance on how to take advantage of the opportunities available in the online environment - therefore allowing PT programs to not wait until face-to-face classes are safe and permissible for the teaching, learning, and assessment of lab activities.

Pitfalls (Don'ts)	Solution (Do's)	Examples of Best Practices
Do not try to replicate your face-to-face lab in the online environment. Where the lab is a one-way teaching event introducing the content.	Use synchronous time purposefully and sparingly.	Provide required pre-lab activities for the students to "arrive" to lab prepared with the ability to meaningfully apply and demonstrate the content. Examples of required pre-lab activities: - Students submit answers to guiding questions about a case. - Students share a video teaching their peers a skill. - Students create and submit a clinical decision making chart. - Students submit a self-reflection on their experience practicing skills (what works well, what is still unclear or difficult).
	Use small groups (10-12 students max if possible).	The lab instructor facilitates application of the content during the synchronous session rather than re-instructing the content - Student instruction, demonstration of skills with peer and instructor feedback. - Peer explanation of clinical decisions surrounding a pre-lab case. - Instructor explanation and facilitation of pre-lab guiding questions of a case, tying in clinical pearls.

Pitfalls (Don'ts)	Solution (Do's)	Examples of Best Practices
Do not re-teach skills that the students have video examples of.	Use lab time to clarify common errors and/or 'muddy points'.	To avoid the lab turning into you re-teaching everything the students have a video example of, before lab have the students submit 'muddy points' of skills or areas they need clarification for/having trouble with. Demonstrate/re-teach those skills as needed.
Do not have only one video example/resource demonstrating the skill being instructed.	Have multiple videos and instructional resources for the lab skills (instructor-created, student-created, publisher/outside resource).	- Create many short video snippets of you performing a skill incorrectly, have the students submit a document where they (1) identify the error(s), and (2) provide details on how to correct the error(s). - Assign each student 1 skill they must record themselves (and submit to a class-wide discussion forum) demonstrating/instructing others on the skill; Require peer feedback and facilitate this by providing a rubric for students to use to give one another feedback on skill performance. - To help show there is not only one 'right' way to perform a skill - utilize and embrace 'outside' videos from publishers, YouTube etc. Design discussions and/or reflections on differences observed and clinical pearls of how skills may need to be adjusted in clinical practice.

Pitfalls (Don'ts)	Solution (Do's)	Examples of Best Practices
Do not wait until face-to-face labs are permissible/safe for the students to practice skills	Provide the students guidance on how to best learn and practice skills. Break this down into cognitive and psychomotor activities.	Cognitive practice - Create study guides breaking down the skills step-by-step - Practice the skills through visualization - Practice the skills by verbalizing the steps of the skills and how to properly perform the skills. Psychomotor practice - With others (family members, roommates etc.) if possible - With stuffed animals (make-shift mannequins) - On an imaginary friend. Accompany the visualization and verbalization with physically mimicking the skill
Do not portray that lab activities online are lesser/not as good as face-to-face	Instill and portray confidence to your class that online is a different environment that has different opportunities.	- Although not instantaneous, there is more opportunity for feedback - There is more opportunity for viewing skill demonstration. - There is more opportunity for problem-solving, clinical reasoning, and practice of the skills (increased repetition and practice). - More opportunities for peer-teaching/collaboration. - Provide reassurance that students can safely and adequately learn lab skills even when not meeting face-to-face.

Pitfalls (Don'ts)	Solution (Do's)	Examples of Best Practices

Do not wait until face-to-face labs are permissible/safe to assess skill acquisition.	Create virtual verbal (clinical) reasoning skill checks and psychomotor skills checks.	- Provide very clear instructions and expectations via a rubric that will be used for grading.
		- Use time-limited 'break-out rooms' (i.e. via Zoom) where the student must perform a different task in each room, with a different grader.
		  • Room 1: Perform _____ skill(s) (with feedback at the end)
		  • Room 2: Verbal reasoning/clinical decision making (with feedback at the end)
		- Following the breakout room assessment - require the students to submit a self-reflection on skill performance, what they did well, what they could have done better, and what they learned.
		- For exam security, have the students show you their surroundings via the webcam before starting.

Additional Resources:

RECORDED WEBINARS ON BEST PRACTICES IN ONLINE EDUCATION FOR PT SCHOOLS:

- <u>Teaching a Hands-on Profession in an Online Environment</u>

- <u>Opportunities and Pitfalls of Online Education: Points to Consider During these Uncertain Times</u>

- <u>Teaching and Learning Psychomotor Skills at a Distance</u>

- <u>Student Assessment in an Online Environment</u>

ASSOCIATION FOR EDUCATIONAL COMMUNICATIONS & TECHNOLOGY (AECT) EXPERT RESOURCES WITH RECOMMENDATIONS FOR BEST PRACTICES FOR REMOTE TEACHING AND THE TRANSITION TO ONLINE COURSE DELIVERY:

- <u>Higher Education Expert Resources for Online Teaching and Learning with Commentary</u>

- <u>Teaching Online Resources</u>

- <u>How to Quickly and Safely Move a Lab Course Online</u>

AUTHOR BIO:

Timothy Miller PT, DPT, EdD, GCS is Director of Education & Faculty Development for Rehab Essentials, Inc. He also currently holds adjunct faculty positions in the physical therapy department at Nova Southeastern University as well as for the College of Education in the School of Teaching and Learning at the University of Florida. Prior to his current professional roles, Dr. Miller spent 7 years under the leadership of Dr. Mary Blackinton as full-time faculty for the DPT program at Nova Southeastern University - Tampa. Dr. Miller received his DPT degree from Elon University and his EdD in Educational Technology from University of Florida's top-ranked doctoral program in curriculum and instruction. Dr. Miller's research interests focus on use of educational technology for teaching and learning hands-on skills, as well as best practices of blended and online learning in higher education. He recently received acceptance of a chapter proposal for the upcoming book *Blended Learning: Research Perspectives Volume 3*. He is also co-author on a recently accepted presentation titled "*Ensuring Quality: The Roles of Online Program Leaders*" which will be part of the 2020 Association for Educational Communications & Technology (AECT) International Convention proceedings. Additionally, he has presented

on blended learning in physical therapy education at ELC and CSM conferences and has been an invited speaker on active learning and the use of educational technology for the Academic Faculty SIG of the APTA's Academy of Physical Therapy Education. Dr. Miller is also one of the charter members of the ACAPT Education and Pedagogy Consortium. He can be contacted via at:

t.miller@rehabessentials.com