# Session Title: Learning Theories Made Easy: Perspectives from a Flight Instructor, DCE, and CVP Residency Faculty Member

**Speakers**: Michael Shoemaker, PT, DPT, PhD, Ashley A. Van Dam, PT, DPT, CCS, & Crystal J. Gluch, PT, DPT, CCS

Session Description: Effective teaching in the clinic and the classroom should be based on a solid foundation of learning theories. However, most clinical instructors and residency faculty lack any formal instruction in how to teach, and likely find most discussions of learning theories to be esoteric. Flight training is a relatively condensed course of instruction that requires learners to integrate didactic knowledge into aeronautical decision-making and psychomotor skills in a short period of time. Aviation safety and training principles have many corollaries to physical therapy practice and education, including the preparation of flight instructors using simplified explanations of how to apply learning theories (i.e. the "Laws of Learning") to teaching decision-making and psychomotor skills. For example, the law of primacy receives minimal attention in health professional education yet is critical for instilling attitudes and behaviors such as blood pressure monitoring. Therefore, the purpose of this presentation is to introduce attendees to the laws of learning as described by the Federal Aviation Administration by providing specific examples and recommendations on how to apply these learning principles in cardiovascular and pulmonary (CVP) physical therapy clinical education and residency training. This session will be collaboratively presented by a Credentialed Clinical Instructor Program Level 1 Trainer/Director of Clinical Education, a commercial pilot/flight instructor, and former CVP residency faculty member, all of whom are experienced CVP physical therapists, clinical educators, and academic faculty. If the word "pedagogy" makes you anxious or causes you to tune-out, this session is for you!

Q&A Discussion

## **Objectives:**

1. At the completion of this session, participants will be able to integrate the concepts of perception and insight into clinical teaching and debriefing.

2. At the completion of this session, participants will be able to identify key areas of practice in which the law of primacy can be most leveraged.

3. At the completion of this session, participants will be able to design learning experiences based on the laws of learning to include the laws of readiness, exercise, effect, primacy, intensity, and recency.

4. At the completion of this session, participants will be able to analyze simulated clinical scenarios to hypothesize errors in learning.

## What will be the clinician/educator takeaways/skills that can be utilized immediately?

Increasing clinical instructor and residency faculty understanding and application of learning theories is an important component of ensuring the quality of physical therapy education and residency training. Upon completion of this session, clinical educators and residency faculty will have concrete ideas and plans for intentional application of learning theories in clinical instruction.

#### **Speaker Bios:**

## Michael J. Shoemaker, PT, DPT, PhD

Speaker Bio: Dr. Shoemaker received a B.S. in Physical Education with an Exercise Science Specialization from Calvin College in 1996. In 1999 he earned his Doctor of Physical Therapy degree from Slippery Rock University, and earned his PhD in Interdisciplinary Health Sciences from Western Michigan University in 2012. He was board-certified as a Geriatric Clinical Specialist by the American Board of Physical Therapy Specialties 2002-2022. His practice has been focused in cardiopulmonary and geriatric rehabilitation across multiple practice settings including acute care, long-term acute care, long-term care, subacute care and outpatient care, and he currently practices in the cardiothoracic critical care setting at the Corewell Health Meijer Heart Center. Dr. Shoemaker's research interests, spanning 48 peer-reviewed papers, 5 textbook chapters, 28 peer-reviewed platform/poster presentations, and 7 continuing education presentations/workshops, includes cardiopulmonary rehabilitation, health policy, and the use of simulation in professional and interprofessional education. Dr. Shoemaker is also an instrument-rated commercial pilot, flight instructor, and instrument flight instructor. He serves as an instructor pilot, check pilot, and mission pilot who flies search and rescue and homeland security missions for the Civil Air Patrol, the auxiliary of the United States Air Force.

## Ashley A. Van Dam, PT, DPT, CCS

Speaker Bio: Dr. Van Dam graduated from Grand Valley State University in 2007 with a B.S. in Health Science and in 2010 with her Doctor of Physical Therapy Degree. She became a Board-Certified Cardiovascular & Pulmonary Clinical Specialist in 2022. The focus of Dr. Van Dam's clinical practice has been within the acute care and critical environments, and she continues to practice clinically within critical care at Corewell Health West's Meijer Heart Center. She previously served as the Site Coordinator of Clinical Education for a large hospital system for 7 years prior to joining Grand Valley State University's DPT program in 2021. Dr. Van Dam is a Director of Clinical Education, a Level 1 and Level 2 Credentialed Clinical Instructor, a Level 1 CCIP Trainer, and is currently the Co-President of APTA Michigan's Clinical Education Consortium.

## Crystal J. Gluch, PT, DPT, CCS

Speaker Bio: Dr. Gluch is a Board-Certified Clinical Specialist in Cardiovascular and Pulmonary Physical Therapy. Dr. Gluch earned her Doctor of Physical Therapy (DPT) degree from Grand Valley State University and completed a post-professional Cardiovascular and Pulmonary Physical Therapy Residency with the Veterans Affairs (VA)

#### l confirm

Ann Arbor Healthcare System. During her time as a resident, she was recognized nationally by the American Physical Therapy Association for her contributions to the profession with the Outstanding Physical Therapist Resident Award. Following residency, Dr. Gluch served as a core faculty mentor within the VA – Ann Arbor Residency closely training multiple residents over several years. Her clinical practice included cardiac and pulmonary rehabilitation, acute care, critical care, subacute care, and outpatient care. Dr. Gluch has recently transitioned to core faculty for Grand Valley State University's DPT program and continues to serve as adjunct faculty for the VA – Ann Arbor Cardiovascular and Pulmonary PT Residency.

#### **References:**

1. Myers K, Bilyeu C, Covington K, Sharp A. Clinical Teaching Competencies in Physical Therapist Education: A Modified Delphi Study. Phys Ther. 2022 Jul 4;102(7):pzac063. doi: 10.1093/ptj/pzac063. PMID: 35639979.

2. Jensen G, Nordstrom T, Mostrom E, Hack L, Gwyer J. National Study of Excellence and Innovation in Physical Therapist Education: part 1-design, method, and results. Phys Ther. 2017;97: 857–874.

3. Commission on Accreditation in Physical Therapy Education. Standards and required elements for accreditation of physical therapist education programs. 2020. Accessed April 20, 2021. <u>https://www.capteonline.org/globalassets/capte-docs/captept-standards-required-elements.pdf</u>.

4. McCallum CA, Reed R, Bachman S, Murray L. A Systematic Review of Physical Therapist Clinical Instructor Demographics and Key Characteristics: Impact on Student Clinical Education Experiences. Journal of Physical Therapy Education (American Physical Therapy Association, Education Section). 2016;30(3):11-20. doi:10.1097/00001416-201630030-00004

5. American Physical Therapy Association. Association Profile: January 2024. 2024. Accessed April 11, 2024.

www.apta.org/contentassets/46e67b95292b4a1581dd1fc8520d30aa/apta-associationprofile-2024.pdf.

6. Hasen RL, Stolfi AM. Failure to Fail in Clinical Education: Are We Failing the Students and the Profession? American Physical Therapy Association Combined Sections Meeting. Boston, MA. 2024.

7. Shoemaker MJ, Collins SM. From the Flight Deck to the Bedside: Core Aviation Concepts Applied to Acute Care Physical Therapist Practice and Education. Phys Ther. 2023 Dec 6;103(12):pzad125. doi: 10.1093/ptj/pzad125. PMID: 37712880.

8. Aviation instructor's handbook. U.S. Dept. of Transportation. Federal Aviation Administration, Flight Standards Service. 2008.

9. Marks T, Thakkar R, Pottorf O, Rosen Z, Hagan L. Effect of a First Clinical Experience on Physical Therapy Students' Perception of the Importance of Obtaining and Assessing Blood Pressure. J Allied Health. 2023 Summer;52(2):127-135. PMID: 37269031.