



Application of the Learning Sciences to PT Education:

Entry-level DPT Program

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- 28 learners/cohort
- 7 semesters
 - 16-week semesters
 - 8-week terms
- 32 weeks full-time clinical education
- Blended program
- Learning frameworks/practice



CONCORDIA
UNIVERSITY
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DEPARTMENT OF
PHYSICAL THERAPY



Learning Activity #1: Patient history

CATEGORY	0
Current complaint/chief condition	left knee pain weight bearing shes been having this issue for 3 to 4 months now and there was no traumatic injury it is just progressively worse overtime
Pain	What would you rate your pain on a scale of 0-10? Answer: weight bearing is 5. Non weight bearing 0. Is your pain constant or off and on? Answer: off and on. What makes your pain feel better/worse? Answer: weight bearing. better with rest. How would you describe your pain? Answer: aching.
Medical history	Any health concerns that run in your family? some cancer, heart disease; brother had both hips replaced but no knee replacements Have you been using a walker for post surgery mobility? used a walker for about a month then used a cane - not using a cane now (wasn't seen from observation)
Surgical history	1. Is there any correlation with family members related to the surgery? ANSWER: My brother is the only person that has shown similar symptoms, however, he has only had both hips replaced 2. Are you feeling similar symptoms in your left knee, as compared to the right knee before surgery? ANSWER: Yes, very similar symptoms
General health/review of systems	1. Cardiovascular: Heart rate (70) 2. Perception of respiration: (normal) 3. R vs L dominate: Ambidex) 4. Sit to stand (good, favor left side) 5. ROM (limited on R) Knee extension 6. Balance coordination (nervous/ declining balance) 7. Past falls? (fall couple months ago at movie theater in hallway) 8. Do you feel weakness in legs when doing tasks? (good). Lengthy walking =weakness
General physical activity level	1. Are you physically active? 2. What activities do you do to stay active? 3. How many days a week?/How long do you ____? 4. Are there any activities or movements that increase your pain or have a hard time doing? No real regular exercise other than rides a recumbent bike every day 20-30 minutes. Pain walking and standing for too long like in church. Walking up stairs (vs down) increases pain. No weightbearing activities.
Medications	Simvastatin (Chloesterol), Lisinoprol(BP), Gabapentin(300mg) 1-2 times a day, Cyproheptadine (Migranes), Celebrex (for pain), Glucosamine, Daily Vitamin, Over the counter Apanesia. Sulfa was taking but stopped due to allergic reaction and no other medication reaction. All the other medication were 1mg day, 2 a day.

Learning Activity #2: Teaching Principles

A	B	C	D	E	F
Task/Objective	Audience characteristics	Learning theory applied	Foundational knowledge	Learning activities (at least 2)	Assessment
Teach a large group (15) of 6-year-olds to play soccer	High-energy, short attention span, talkative, variety of personalities and capabilities	Behaviorist theory	Running/exercise, kicking, teamwork, defense/offense	Short games ("Clean up your backyard" to practice kicking OR keep away and everyone has a ball), simple drills (dribble to cone and back using only the inside of your foot)	Ability to run and kick the ball to some capacity, they are able to work together as a team (win a game, move the ball from side to side, etc.), defend the other team when they have the ball, move the ball toward the goal when we have the ball (offense)
Teach a small group (4) senior citizens at an assisted living facility to complete a series of chair exercises	good listeners, mobile sitting down, semi-independent	Behaviorist theory	learn the different exercises in a complete and fluid motion	bicep curls sitting, rows, seated marching, ball squeezes	Observing the exercises are being completed without verbal cues being explained
Teach a single, middle-aged woman with a history of a severe TBI how to get in and out of a standard bathtub safely	balance/coordination issues, short attention span, cognitive impairments, fall risk, no additional help	Cognitivism	Stepping, sitting, grabbing, balance, use of arms for support	Marches over an object, dynamic balance exercises, see how she responds to directions and give feedback to improve	berg balance scale and grip strength assessment, once she doesn't need verbal, tactile, or demonstration cues
Teach a visually impaired, middle-age man how to navigate the produce section of his local grocery store	visually impaired, middle-aged, men can't navigate grocery stores, some modifications that allow him to function, wearing glasses	Constructivism	environmental awareness, problem solving, ask questions, tactile identification, multitask w/ cart/basket	Obstacle course (navigating objects that are on the floor), identifying objects and bring them back, add difficulty by talking to pt during tasks/alter environment, practice those things while holding object	Easily navigate obstacles while being distracted, identify correct object, balance assessment, problem solve if environment/task changes
	Poor memory, low frustration tolerance, low motivation, possible mobility limitations,	Behaviorist theory	Directions (right/left), understanding of locations/places, ask questions	-Color/shape map signs - identification - practice activity	1) can they get there (A to B) 2) Distance traveled (measurable)
Teach new parents how to safely hold and feed their newborn infant	Inexperienced, nervous, willing to learn, soon to be exhausted	Behaviorist theory	Holding light-moderate weight for long periods of time, correct posture of parents	1) Practice holding form with a baby doll. 2) Efficiently preparing a bottle and monitoring the child's feeding.	Perform feeding the new born, safely and efficiently hold the baby (with one of those "real-life" dolls)
Teach a large group (20) of teenagers how to safely use the high school weight room equipment	short attention span, tired, inattentive, novice learners, variety of learning styles	Constructivism	General body awareness, general idea of right and wrong	Demonstrate and have the students repeat the exercise, have the students start with light weight, use a student to demonstrate and have the students point out what they are wrong, teach proper spotting, start on smith machine for bench press, squat (for safety)	Have students perform tasks and teacher can provide necessary modifications, check form

Learning Activity #3: Teaching Principles



Final Assessments



B+

Patient able to complete task with moderate verbal and visual cuing. Points for spirit.



A-

Patient requires minimal assistance to complete tasks. Able to continue without visual or verbal cues.



C

Patient requires max. assist to safely complete task. Requires remediation

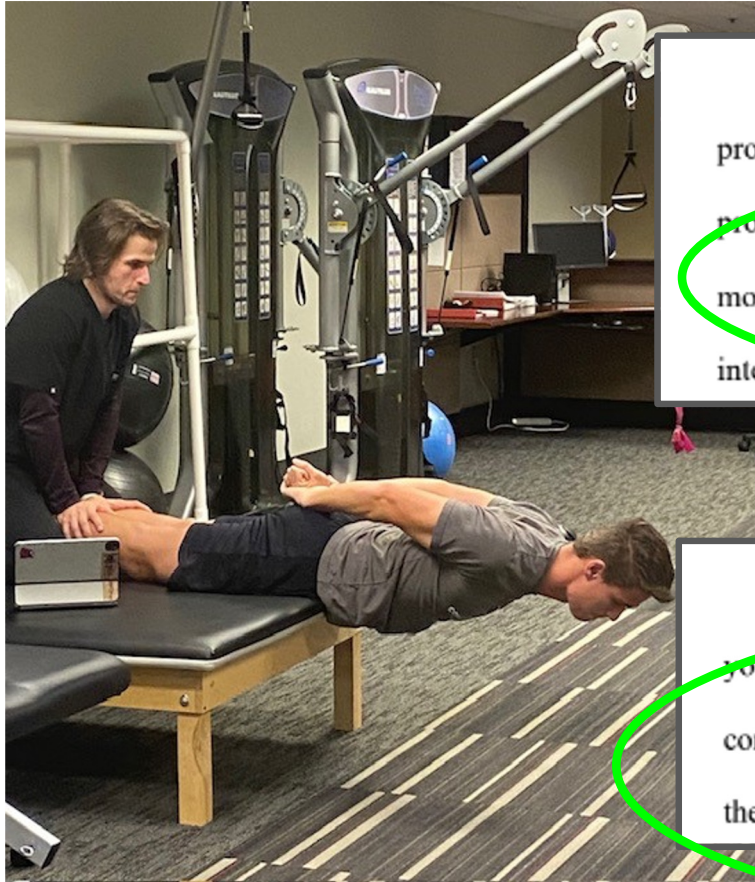
Group Project & Presentation

Attached Files: General consent form.pdf (142.373 KB) Group Project rubric instructor updated.pdf (372.276 KB)

Form your own groups of 3 people. Your assignment is as follows:

- As a group, identify a community of learners and a relevant topic for these learners that will be your focus for this assignment.
- Plan a time when you will provide this learning opportunity to your identified learners. Be sure you plan well ahead of Week 8!
- Plan the learning activity including the following elements:
 - what is the topic?
 - what are learning objectives (what do you want your learners to achieve from this?)?
 - what learning strategies will you use (ideally 3)?
 - are there any potential communication issues with your learners that you need to consider? how might you adapt to accommodate these issues?
 - how will you know if your objectives are met (how will you assess your learners?)?
- plan and deliver the learning activity. When carrying out the learning activity, be sure to record a brief (1-2min) video of the learning activity. Please get consent from your learners that it is ok to be recorded for educational purposes.
- create a presentation about this process (please see the attached rubric to understand what elements to include in the learning activity as well as the presentation). In class, the students will present their presentation to their instructor and classmates. You will also complete two assessments of this project; one for your own group and another for one of your peer group's project. These two assessments will make up 15% of your total grade for this assignment.

Learning Activity #4: Reflection



In the context of physical therapy patient care, the incorporation of a personal wellness profile takes on a pivotal role, especially for individuals dealing with chronic conditions or in the process of recovering from injuries. This approach aligns seamlessly with the biopsychosocial model of healthcare, a comprehensive framework that acknowledges and addresses the interconnected nature of various factors influencing an individual's well-being. The

Using a wellness profile in physical therapy patient care can be a great tool to have. If you have a patient who has deficits in their core, you can run the anterior, lateral, and posterior core tests on them to find specific areas that need improvement. Based on the results, you can then create specific goals you want your patient to achieve by the end of their care with you.

Learning Activity #4: Reflection

extra body fat. With my history of being self-conscious, it was a little alone have someone else tell me that. Besides the weight topic, it could someone say that you are weak in your core muscles, slow to get up health if they are not ready to face and change it. On the other hand



Performing the wellness tests was eye-opening to my health, where I am currently and where I want to be. Surprisingly, I felt it was going to be easy however, that was not the case. My

Learner perspective:

What is one word you would use to describe our curriculum?

supportive

awesome

hands-on

unique

challenging

innovative

collaborative

applicable

interactive