**Title and Focus of Activity:** Proprioceptive Neuromuscular Facilitation (PNF) Lab Video Assessment

*Intervention*

**Contributor(s):** Patricia McGinnis PT, MS, PhD [patricia.mcginnis@stockton.edu](mailto:patricia.mcginnis@stockton.edu)); Lauren Del Rossi PT, DPT, PCS [lauren.delrossi@stockton.edu](mailto:lauren.delrossi@stockton.edu)

Stockton University, School of Health Sciences, Department of Physical Therapy

**Course Information**: Neuromuscular Physical Therapy I; 7 credits; Fall semester of the 3rd (final) year, within the second module of the course.

**Learning Activity Description:**

Context: Persons with central nervous system dysfunction account for a significant portion of the population seen by physical therapists. This activity works to integrate intervention techniques based on evidence-based principles of motor learning, motor development, applied neuroanatomy / neurophysiology, neuroplasticity and clinical neurology. Recognizing errors and learning from mistakes are important parts of clinical skill development.

Purpose: To promote self-assessment, provide constructive feedback to peers, and foster reflection. Students aim to improve psychomotor performance of the intervention techniques of PNF on a lab partner and then are prompted to assess the outcome of the specified technique on an individual with alterations in body structure and function related to central nervous system dysfunction. We utilize PNF techniques but this could be adapted for any other psychomotor skill (e.g patient transfers).

This assignment follows introduction and practice of concepts via 2 hours of lecture and 3 hours of lab practice of PNF principles, techniques and tools of facilitation. Content includes UE / LE patterns, scapular & pelvic patterns integrated with facilitation tools (manual contacts, visual / verbal cues, traction, approximation, quick stretch, and appropriate resistance). PNF techniques include rhythmic initiation, reversal of antagonists, hold-relax, contract-relax, timing for emphasis, and normal timing. Students can pick from any of the patterns presented and practiced in class to demonstrate and videotape for the assignment.

Student Instructions

**PNF Lab Video Assessment**

Name: Self-Assessment Grade (65%):

Lab Partner: Peer Feedback Grade (35%):

1. Choose 2 examples from lab to demonstrate. For each example, state the tools of facilitation, PNF technique, and the pattern you will be performing at the beginning of the video segment.
2. **Videotape** your examples; each person should demonstrate multiple repetitions of the specific example in order to permit review of the aspects listed above.
3. **Debriefing**: Review each video with your partner. Spend the first 5 minutes writing individual observations / impressions followed by discussion. During the debriefing, identify aspects of the performance to modify &/or refine. Refer to the guiding questions below to assist with the debriefing.
4. **Written Reflections**: Each person will write a 1-2 page summary of: a) your self-assessment and the feedback you received from your colleague, and b) feedback you provided to your colleague. Consider the following guiding questions for your reflections:

* What are you doing? Why are you doing it?
* What worked well? How could you modify or refine what you did?
* Did your intervention go as planned? Did you get the movement response from the “patient” that you intended? How would you expect the motor response from a client with neuromuscular impairments to differ?
* What feedback from your partner was most helpful?
* What did you notice when reviewing your partner’s video examples? What feedback did you provide to help them refine their performance?

1. Upload video segments and written reflections in the designated area on Blackboard.

Students refer to the following performance criteria from the Practical Examination Grading rubric throughout all lab activities:

1. Correctly explains and/or demonstrates therapeutic procedures prior to intervention.
2. Properly positions patient/self for examination/intervention.
3. Performs intervention in an organized manner.
4. Monitors patient response to activities.
5. Uses proper body mechanics.
6. Performs task appropriately/correctly.
7. Uses correct manual contacts.

Time for student to complete the activity: Activity completed outside of class: 30 minutes making the video with partner, 60 minutes debriefing and providing feedback to partner (each person), and then another 60 minutes writing up reflection and suggestions

Readings/other preparatory materials:

O’Sullivan SB, Schmitz TJ, Fulk GD. *Physical Rehabilitation*. 6th ed. Philadelphia, Pa: F.A. Davis; 2014.

Ch. 10 Strategies to Improve Motor Function (p.393-443)

Learning Objectives:

1. Demonstrate two examples of PNF (including the tool of facilitation, the PNF technique and the specific PNF pattern).
2. Utilize the tools of facilitation and specific PNF techniques to foster a motor response on a lab partner.
3. Reflect on self assessment of psychomotor performance as well as peer feedback.
4. Write individual observations/impressions following the discussion with lab partner regarding performance and identify areas of further refinement.

Methods of evaluation of student learning:

Written Reflections will be assigned a grade based on the following:

1. Outstanding work: Reflection paper is well-written and clearly articulated, demonstrates understanding and thoughtful reflections on the examples with a clear plan to refine skills; consistently provides constructive feedback in a diplomatic and professional manner = 93-100
2. Above average work: Reflection paper is generally well written, demonstrates understanding and reflection on the examples, may be unclear on one or two points; articulates a plan to refine skills; provides constructive feedback in a diplomatic and professional manner = 88-92
3. Average work: Reflection paper demonstrates superficial understanding and reflections on the examples, may be unclear on a few points; articulates a plan to refine skills; periodically provides feedback in a diplomatic and professional manner = 83-87
4. Below average work: Reflection paper demonstrates limited understanding and reflections on the examples, is unclear on several points; articulates minimal plan to refine skills; sporadically provides feedback in a diplomatic and professional manner = 77-82
5. Unacceptable work: Reflection paper demonstrates no understanding or reflection on the examples; is unclear on numerous points; does not provide plan to refine skills; does not provide feedback in a diplomatic and professional manner = ≤ 76

Supplemental Instructor Grading Rubric for Video Reflection Assignment

1. Do students address the Guiding Questions from the Assignment? Deduct 1-2 points for questions not addressed, partially addressed.
2. The following suggestions apply to Self-assessment and Peer feedback reflections:
   1. Notice if therapist was positioned in the diagonal (- 2 points)
   2. Provide specific feedback to partner (-2 points)
   3. Manual contacts on appropriate muscle groups; also includes shoes off for LE foot & ankle being addressed; manual contacts on distal components (eg- close / open fingers); (-2 points for each that apply)
   4. Verbal cues succinct & laymen’s terms
   5. In reflection state verbal command for distal components 1st (e.g., “squeeze my hand”, “open your fingers”, then “up & out” etc.)
   6. Correctly name pattern being performed (eg, D2 Flexion) – credit is given if stated incorrectly on video but addressed in the reflection
3. Examples of great insights during reflection:
   1. Demonstrate the movement passively 1st to help the client understand
   2. Therapist standing in the diagonal; weight shift center of gravity
   3. Manual contacts on the desired muscle group
   4. Give verbal cues earlier – e.g., just before initiating movements
   5. Identify what worked well & what to refine with further practice