# Motor Learning: Tools to Enhance Academic Skills Through Movement



Josephine Bardabelias, PT

# Faculty

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Josephine Bardabelias, PT is a Graduate of Hunter College's Physical Therapy program and has more than 30 years of experience working in a variety of settings, with a focus in pediatrics. Throughout her career she has treated children in acute care, N.I.C.U., early intervention and school-based facilities.

Disclosure Financial: Josephine Bardabelias receives a speaking fee when she teaches for Education Resources, Inc.

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# About this Live Webinar

Exercise not only strengthens the body but enhances the brain as well. Research continually demonstrates the importance of movement regarding cognitive skills. As therapists working in pediatric settings, we have the ability to impact these skills through the use of purposeful, fun and creative therapy sessions. This workshop will present innovative ways to integrate movement with learning while concentrating on developmental and functional concepts. Applying this approach to neuroanatomy, we will identify structures that can be impacted during our treatment sessions, resulting in more enriched activities. We will explore sensory and motor systems from primitive reflexes to executive functioning while discussing their impact on focusing, memory and overall learning. Using evidenced based research, brain breaks, videos, group discussions, and break-out sessions, therapists will acquire a unique and "moving" way to utilize these tools the very next day.

# **Learning Objectives**

- 1. Correlate the relationship between neuromotor development and learning.
- 2. Recognize the impact of whole brain integration activities on learning.
- 3. Identify the four phases of motor development.
- 4. Choose a treatment session utilizing the concepts of neuroplasticity and sensorimotor development.
- 5. Enhance a current treatment plan utilizing an educational perspective, using the case study provided.

# Audience

This course is designed for PTs, OTs and SLPs working in the areas of pediatrics, neurology, early intervention and school-based practice.

# Help your patients achieve better outcomes.



#### Schedule - Day 1 6:10 pm to 9:30 pm EST (US)

6:10-6:30	Webinar Registration/Zoom Course Opens			
6:30-7:00	Introduction			
	Correlation between Movement and Learning			
7:00-7:20	Neuroanatomy			
	Synaptic Connections			
7:20-9:30	Cerebral Anatomy/Physiology			
	Laterality			
	Lobe Functions			
	• Case Presentation with Discussion: Child			
	with multiple disabilities: middle ear			
	malformation, visual deficits, balance issues,			
	bradykinesia, intellectually disabled and			
	behavioral issues			
	Reticular Activating System			
	• Breakout Session-Novel uses for common			
	items			
	Corpus Callosum			
	• Importance of cross-lateral movements			
	• <b>VIDEO:</b> Examples of cross lateral exercises			
	• <b>VIDEO</b> : Testing the corpus callosum			
	Cerebellum			
	• VIDEO: Cerebellar Testing			
	<ul> <li>Hippocampus   Thalamus   Amygdala</li> <li>Breakout Session: Apply the concept of Whole Brain Integration to enhance a frequently used treatment activity</li> </ul>			
	5			
Schedule – Day 2 6:10 pm to 9:30 pm EST (US)				
6:10-6:30 Webinar Registration/Zoom Course Opens				
6:30-7:00	Developmental Neurology			
	Neuroplasticity			
7:00-7:40	Relationship between exercise and cognition			
	Neural Enrichment BDNF			
	Movement and Executive Functioning			
7:40-9:30	Phases of Motor Development			
	Reflexive Phase   Rudimentary			
	Fundamental Phase   Specialization Phase			
	BREAKOUT: Video Analysis & Discussion of			
	Treatment Levels			
	• <b>VIDEOS:</b> Primitive Reflex Testing (ATNR,			
STNR, TLR)				
	Primitive Reflex Integration Exercises			
	Rudimentary Phase-Laterality, Stationary,			
	Locomotor, Object Manipulation			

- Fundamental Phase
  - Weight Shifting30+40+ | Rotation | Reciprocal Patterning | Grading | Timing/Rhythm
- Creative treatment ideas incorporating educational concepts

#### Schedule – Day 3 6:10 pm to 9:30 pm EST (US)

6:10-6:30 Webinar Registration/Zoom Course Opens

6:30-8:30 Sensory Systems and their effect on Student Success

- General overview of Sensory systems
- What does being a student entail?
- Treatment Ideas to address the requirements of a student
- Sensory Processing Disorder
- **VIDEOS**: Sensory Overload and Sound Sensitivity
- Sensory System Dysregulation & Treatment Ideas
  - o Visual | Auditory | Olfactory | Tactile |
  - Interoception | Properloception | Vestibular
- 8:30-9:15 Individualized Pretreatment Considerations
  - ICF Model
     Understanding your student | Health Implications |
     Social-Emotional Aspects | Behavioral Components |
     Teaching Behavior vs. Punishment | Communication
     Strategies | Parental Questionnaire: "Tell us about your child"
     Evaluation Considerations
- 9:15-9:30 Evaluation Considerations
  - School-based OT/PT Motor Profile

#### Schedule – Day 4 6:10 pm to 9:30 pm EST (US)

6:10-6:30 Webinar Registration/Zoom Course Opens

- 6:30-8:40 Effective Treatment Strategies
  - Treatment Continuum for a successful session
  - Basic Needs- importance of and treatment suggestions
  - Removing Antecedents/Distractors
    - Setting up your treatment space
    - VIDEOS -Room set-up ideas
  - Regulation- importance of and treatment suggestions for:
    - Proprioception | Deep Pressure | Vestibular | Breathing Techniques/Counting
  - Basic Treatment Level
    - Motor Planning | Body Awareness
  - Laterality/Crossing Midline
    - Coordination | Timing and Grading

8:40-9:00 Adding Complexity to our Treatment

- How can we promote higher learning skills in our sessions?
   Think Function | VIDEOS: Treatment ideas
- **9:00-9:30** Participant Case Studies: Participants are invited to submit case studies for discussion



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Approved provider of the FL Board of Occupational Therapy-CE Broker for 14 CE hours. This course meets the approval of the TX Board of OT Examiners.

Application has been made to the FL Physical Therapy Association for 14 continuing education contact hours.

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12 hours of this course qualify towards the discipline-specific hours for the 20-hour requirement for NDTA re-certification. They do NOT qualify towards the 8-hour NDTA Instructor requirement for re-certification.

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#### Webinar Dates and Times – 2023

#### May 9, 11, 16 and 18, 2023

#### 6:10 pm EST • 5:10 pm CST • 4:10 pm MST • 3:10 pm PST (US)

Registration is for all sessions. Zoom log-in instructions and course materials will be emailed/added to your ERI account 5-7 days prior to the first date of the Webinar.



\$369 fee. LIMITED ENROLLMENT Cancellation will be accepted until 14 days prior to the start date of the course, minus a \$75 Administration Fee. There will be NO REFUNDS after this 14-day deadline. We encourage you to register online!

#### WEBINAR: Motor Learning: Tools to Enhance Academic Skills Through Movement/Josephine Bardabelias

□ May 9, 11, 16 and 18, 2023

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