

# THE IMPACT OF VERBAL AND NONVERBAL WORKING MEMORY ON LANGUAGE PROCESSING

0.1 ASHA SUPERVISION CEU and 1 Act 48 PDH

**KAREN CLAPPER MS, CCC-SLP/L, BCS-CL  
AND RACHEL SHOENER, OTR/L, FVRS,  
EBIP SCHOLAR**

KAREN CLAPPER IS A MEMBER OF THE FOLLOWING SIGS: LANGUAGE LEARNING AND EDUCATION AND SCHOOL BASED ISSUES. I AM ALSO A MEMBER OF THE INTERNATIONAL DYSLEXIA ASSOCIATION, AND I AM A MEMBER OF THE AMERICAN BOARD OF CHILD LANGUAGE AND LANGUAGE DISORDERS.

RACHEL SHOENER HAS NO RELEVANT RELATIONSHIPS TO DISCLOSE.

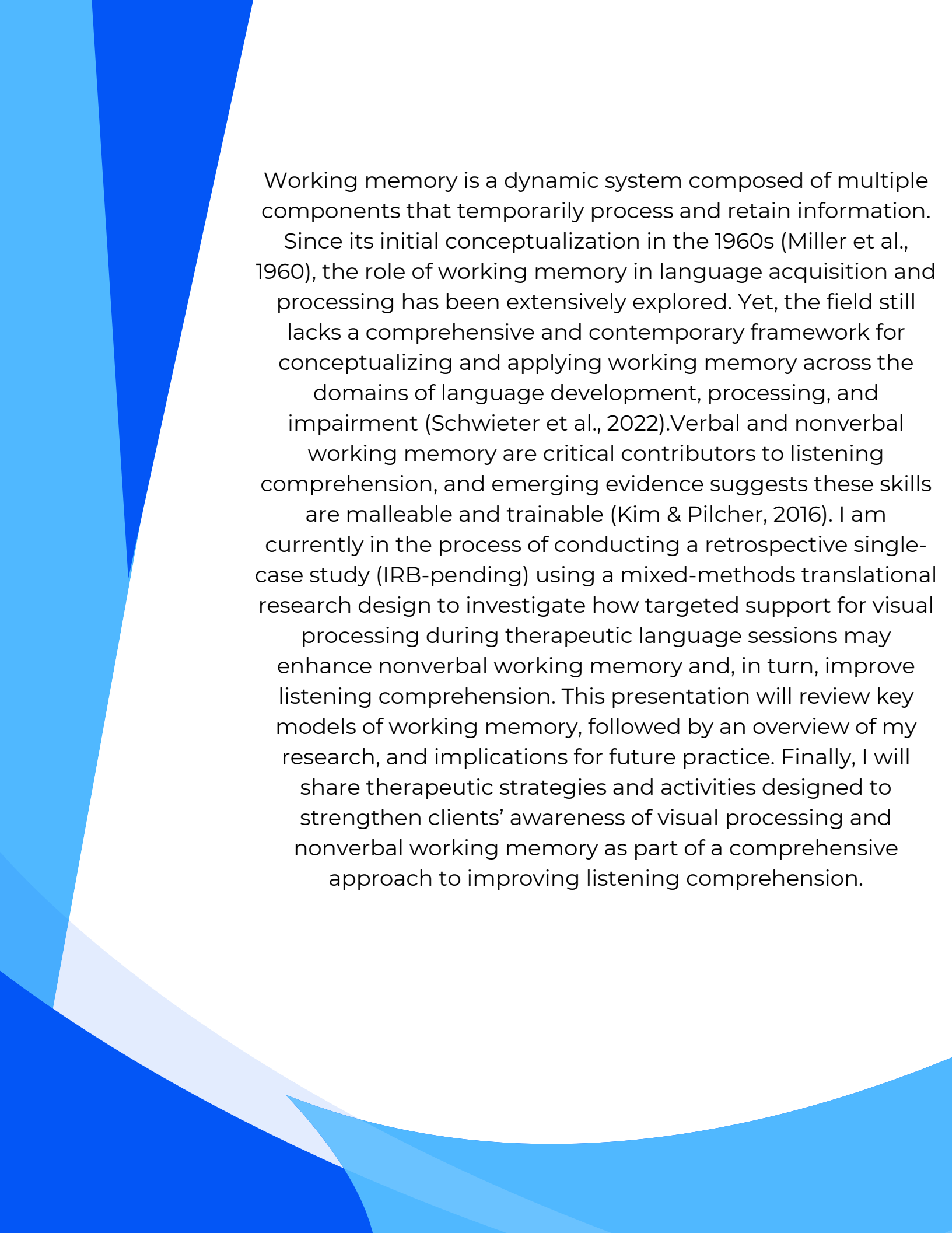
## **Learning Objectives:**

- The attendee will be able to describe how verbal working memory impacts language processing.
- The attendee will be able to describe how nonverbal working memory impacts language processing.
- The attendee will identify therapeutic strategies that can support the client's increase awareness of visual processing and nonverbal working memory.



**ASHA CE**  
**APPROVED PROVIDER**

Pennsylvania  
Speech-Language-Hearing  
Association

The background of the slide features abstract, overlapping geometric shapes in various shades of blue, ranging from light sky blue to deep navy blue. These shapes create a dynamic, modern look with sharp angles and soft curves.

Working memory is a dynamic system composed of multiple components that temporarily process and retain information.

Since its initial conceptualization in the 1960s (Miller et al., 1960), the role of working memory in language acquisition and processing has been extensively explored. Yet, the field still lacks a comprehensive and contemporary framework for conceptualizing and applying working memory across the domains of language development, processing, and impairment (Schwieter et al., 2022). Verbal and nonverbal working memory are critical contributors to listening comprehension, and emerging evidence suggests these skills are malleable and trainable (Kim & Pilcher, 2016). I am currently in the process of conducting a retrospective single-case study (IRB-pending) using a mixed-methods translational research design to investigate how targeted support for visual processing during therapeutic language sessions may enhance nonverbal working memory and, in turn, improve listening comprehension. This presentation will review key models of working memory, followed by an overview of my research, and implications for future practice. Finally, I will share therapeutic strategies and activities designed to strengthen clients' awareness of visual processing and nonverbal working memory as part of a comprehensive approach to improving listening comprehension.

**Speaker's Bio:** Karen Clapper is a distinguished Speech-Language Pathologist with over 40 years of experience serving individuals across the lifespan—from toddlers to older adults. As the Executive Director and Owner of Communication Associates, a private practice established in 1999, Ms. Clapper has collaborated with early intervention programs, school districts, hospitals, and skilled nursing facilities to provide comprehensive, client-centered care. In addition to her clinical work, Ms. Clapper serves as a site supervisor and guest lecturer for several universities in the Philadelphia area, mentoring emerging professionals in the field. For the past 15 years, she has partnered with educational law firms to conduct Independent Educational Evaluations (IEEs) and provide expert witness testimony, advocating for equitable services for students with language-based learning needs. Ms. Clapper is an active member of the International Dyslexia Association and participates in the Language Learning and Education and School-Based Issues Special Interest Groups. She is also a board-certified member of the American Board of Child Language and Language Disorders. Her commitment to global service is reflected in her philanthropic work, offering training to caregivers in children's homes in Kenya. She anticipates returning this summer to provide instruction in play-based therapy techniques for infants and young children. Driven by a lifelong passion for language processing, Ms. Clapper integrates the science of working memory into both diagnostic and therapeutic practices. Her current research—an IRB-pending retrospective single-case study—examines the impact of visual processing on listening comprehension. Committed to advancing the profession, she continues to educate colleagues on the essential role of working memory in language development, honoring the depth and responsibility of the title Speech-Language Pathologist.

Rachel Shoener is an occupational therapist and Owner/ Director of Live Fully Therapy Services. She provides direct services and mentors occupational therapists within her company. Rachel is an Adjunct Professor in Gwynedd Mercy University's Master's-level occupational therapy (MSOT) program, teaching pediatric courses. She has led multi-disciplinary teams locally and internationally to develop collaborative programs to support children's health & well-being. She is currently working to complete a Doctorate of Science in Rehabilitation Science with an emphasis on evidence-based instructional practices for children with high-intensity needs.