A Memory Assessment for Preschool-Aged Children and Special Populations

UA ID Technology #ua14-179

Invention

There is currently no memory assessment that can be used in preschoolers. The Arizona Memory Assessment for Preschoolers and Special Populations (A-MAP) specializes in assessing this particular individuals. The A-MAP contains materials that are verbal, visual, and spatial. This allows for a more precise characterization on the strengths and weaknesses across different modalities. The assessment’s subtests are designed to examine both the recognition and recollection components of memory. The A-MAP is a unique assessment that has the ability to bind memories for object features to specific spatial and temporal objects. The characterization of these diverse memory systems is important for intervention work and clinical research, where the goal is to identify precise targets or end-points for treatment.

Background

Memory is central to effective learning and everyday functions. In addition, impairments in memory form a pervasive part of many neuropsychological and genetic disorders. Currently, there are no treatments for Down syndrome and Fragile X syndrome that act on regions of the brain that are important for the memory. Hippocampus and medial temporal lobes are among these regions. Presently, there are no measures of episodic memory standardized for children under the age of 5. Additionally, measures are not suitable for the elderly who suffer from cognitive impairment, including those with memory disorders like Alzheimer's disease.

Application:

• Can be used in both clinical trials and early intervention work
• Can be used by professionals and paraprofessionals that have minimal experience and supervision
• Able to diagnose and monitor the treatment of young children and those with cognitive impairments.

The University of Arizona, Tucson, Arizona
Advantages

This invention is superior in three aspects; theory, stimulations, and usage of real data. Our stimulation results show improvement in orders of magnitude compared to traditional methods. Real results from data closely replicate the performance of our stimulations.

• Innovative and engaging use of physical materials allows easier testing of children.
• Unique object placement board designed for engaging children
• Fast-paced interactive format for children as young as two years old.
• Provides a detailed profile of strengths and weaknesses across different memory systems.

Patent Information

Patent Pending

Inventor

Dr. Jamie Edgin

Licensing Manager:

Laura Silva

LauraS@tla.arizona.edu
(520) 626-1557

Inventors

Jamie Edgin
Assistant Professor, Psychology

Caron Clark
Postdoctoral Research Associate I, Psychology

The University of Arizona, Tucson, Arizona