A Memory Assessment for Preschool-Aged Children and Special Populations

Title: System and Method for Neuropsychological Assessment for Young Children and Special Populations

Invention: The present invention is a neuropsychological assessment test of different memory processes which access the medial, temporal, neural and the prefrontal cortex regions of the brain. It is currently the only comprehensive test for memory and learning designed for children under 5 years old and individuals with cognitive delay.

This system uses interactions by the subject with the arrangement of 3-D objects. Assessments include verbal list learning, object recognition, scene recognition, spatial location memory, item in context memory, spatial working memory, verbal working memory, processing speed and controlled attention, and prospective memory. While originally developed as a 3-D tabletop model with physical objects, the A-MAP (“A Memory Assessment for Preschool-Aged Children and Special Populations”) is now an easy-to-use mobile application for use with portable devices.

Background: It is difficult for standardized tests to assess the memory of populations who lack the requisite level of cognitive function to participate in them. These populations include children below the age of 5, children with cognitive impairment, and individuals with neurodegenerative diseases like Alzheimer’s. Without such a test, it can be difficult to monitor the progress of treatment. Thus, there is a need for a comprehensive memory assessment suitable to generate clinical profiles across the lifespan and in young populations.

Applications:

- Research
- Clinical diagnosis and evaluations
- Early diagnosis of developmental or neural disorders
- Interventions or assessments for education/schools

The University of Arizona, Tucson, Arizona
• Government agencies

**Advantages:**

• An easy-to-use mobile application
• Works with populations without requiring specific knowledge
• Comprehensive
• Validated
• Inexpensive

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