

Time is of the Essence: Computer-Based Brain Plasticity Training in the Classroom

Elizabeth Stevens, Clare Mitchell, TJ McCallum, Case Western Reserve University

Functional declines in cognition, memory, and sensation are often part of the aging process. In addition, reduced brain activation, noisy processing, and increased use of compensatory strategies all interact to make communication progressively more difficult for older adults. However, research has suggested that training older adults to use brain plasticity-based programs can potentially help them sharpen neural pathways and maintain cognitive functioning. In fact, multiple senior centers throughout the country have made brain plasticity programs available onsite. In this study, a group of thirteen older adults (5 African American, 8 European American) used a computerized brain plasticity-based program in a classroom setting approximately three times per week for eight weeks to determine the effectiveness of using such a program in an adult learning center. The Repeated Battery for the Assessment of Neuropsychological Status (RBANS) was used as a standardized pre-post measure of memory and neuropsychological functioning. As measured by the RBANS, the class as a whole did not demonstrate significant neuropsychological change over time. However, 54% of the students obtained higher RBANS total scores after training, and preliminary qualitative data suggest that many of the students perceived the class to be beneficial and enjoyable. Future research should increase the number of classroom sessions, as there may not have been sufficient exposure to produce significant neuropsychological change. Future research should also evaluate possible changes in self-esteem and affect that occur as a result of using brain plasticity-based computer programs.