

# **Composite: una medida de cognición global.**

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# COMPOSITE: UNA MEDIDA DE COGNICIÓN GLOBAL

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## RESUMEN

Hace 15 años venimos evaluando el rendimiento de las funciones ejecutivas en niños de 4 a 8 años utilizando la plataforma web de evaluación y entrenamiento cognitivo “Mate Marote”. En esta investigación evaluamos diversas funciones cognitivas, como la atención, la memoria de trabajo, el control inhibitorio, la flexibilidad cognitiva, el razonamiento lógico y la planificación. Para facilitar la comparación del rendimiento a través de intervenciones en distintas edades, construimos un puntaje compuesto que encapsula toda la batería de evaluaciones. Incluimos solo una variable por tarea, eligiendo la métrica principal de rendimiento en cada caso. Los resultados reflejan diferencias significativas en el rendimiento de las funciones ejecutivas de niños de 4 y 5 años que participaron de un entrenamiento cognitivo con Mate Marote, en su contexto áulico, durante cuatro meses comparados con un grupo control pasivo. La importancia de estos resultados radica en que, a pesar de que no se hayan observado diferencias significativas en todas las evaluaciones de forma independiente, el entrenamiento produjo mejoras que pudieron capturarse con la medida de cognición global implementada. Una medida como la utilizada nos permite evaluar si las mejoras que se observan en el rendimiento cognitivo de los niños son generalizadas.

## Palabras clave

Medida cognición global - Entrenamiento cognitivo - Funciones ejecutivas - Niños

## ABSTRACT

### COMPOSITE: A MEASURE OF GLOBAL COGNITION

For the past 15 years, we have been evaluating the performance of executive functions in children aged 4 to 8 years using the cognitive evaluation and training web platform “Mate Marote”. In this research, we evaluate various cognitive functions, such as attention, working memory, inhibitory control, cognitive flexibility, logical reasoning, and planning. To facilitate the comparison of performance across interventions at different ages, we constructed a composite score that encapsulates the entire battery of evaluations. We included only one variable per task, choosing the main performance metric in each case. The results reflect significant differences in the performance of executive functions in 4- and 5-year-old children who participated in cognitive training with Mate Marote in their classroom context for four months compared to a passive control group. The importance of these results lies in the fact that, despite not observ-

ing significant differences in all evaluations independently, the training produced improvements that could be captured with the implemented global cognition measure. A measure like the one used allows us to evaluate whether the improvements observed in children’s cognitive performance are generalized.

## Keywords

Global cognition measure - Cognitive training - Executive functions - Children

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