

Pengaruh Permainan Congklak terhadap Kapasitas *Working Memory* pada Siswa Kelas V Sekolah Dasar

Andy Surya Putra
Sri Tiatri (Advisor I)
Naomi Soetikno (Advisor II)
Psychology Faculty Tarumanagara University

Abstract

Congklak game is one of the traditional games that involves several cognitive activities while playing it, such as counting, giving attention, reasoning and planning. The aim of this research is to predict the impact of playing congklak game to the working memory capacity on students. Working memory capacity is the limited capacity used for holding and manipulating the information for further processes in a brief period. This capacity related with the ability of cognitive complex in students' cognition, such as giving attention, thinking, learning, counting, memorizing, comprehension and problem solving. The participants of this research are twelve elementary students of fifth graders from school located in West Jakarta which divided into two groups, namely six students in experiment group and six students in controlled group. The method of this research is pure experiment two groups design by using matched randomized controlled trial that comparing the pre-post data taken from both groups through experimental period. Based on the statistical analyses using comparing means of Independent Sample t-Test, there is significant differ experimental and controlled group in *Digit Span* ($F = 1.176, p > 0.05; t(10) = 2.481, p < 0.05$) and *Square Span Reverse* ($F = 3.673, p > 0.05; t(10) = 3.167, p < 0.05$), Nevertheless, there is no differ between experimental and controlled group in *Square Span Forward* ($F = 0.235, p > 0.05; t(10) = 2.168, p > 0.05$) and mean score of academic attainment in the class ($F = 1.163, p > 0.05; t(10) = 0.356, p > 0.05$). Results show that there is a significant impact of playing congklak game to working memory capacity on student ability in visuospatial sketchpad for visual imagery information and phonological loop for verbal information. Nevertheless, there is no impact of playing congklak game to the academic achievement in the classroom.

Keywords: working memory capacity, visuospatial sketchpad, phonological loop, academic achievement, congklak.