

ABSTRACT

Reading comprehension is a fundamental skill in EFL learning, yet many junior high school students struggle to comprehend narrative texts, particularly at the inferential and evaluative levels. This study investigated the effect of Brain-Based Learning (BBL) on the reading comprehension ability of eighth-grade students at SMP Negeri 34 Bandung. A quasi-experimental design with a non-equivalent control group was employed, involving 64 students divided into an experimental group ($n = 32$) receiving four BBL sessions based on Caine and Caine's (1991) framework, and a control group ($n = 32$) receiving conventional instruction. Reading comprehension was measured using a test based on Barrett's Taxonomy (1968), and data were analyzed using the paired-samples t-test and independent-samples t-test after the normality and homogeneity assumptions were satisfied. The experimental group's mean score improved significantly from 54.38 to 72.34 ($t(31) = -9.431$, $p < .001$), while the control group showed no significant improvement (64.22 to 65.00; $t(31) = -1.359$, $p = .184$). However, the independent-samples t-test found no significant difference between the two groups' posttest scores ($t(62) = 1.460$, $p = .149$). These findings indicate that BBL significantly improved the experimental group's reading comprehension, although this improvement was not significantly greater than that achieved through conventional teaching. English teachers are recommended to incorporate brain-compatible learning principles into reading instruction, and future studies are encouraged to use a longer treatment period and larger sample.

Keywords: *Brain-Based Learning, reading comprehension, EFL, quasi-experimental, junior high school students*