

Using Chess as a Mathematics Teaching Tool
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This study explored how instructional approaches utilizing the oft-overlooked nonsynonymous nature of 'arithmetic' and 'mathematics' may alter student's mathematics performance. The purpose of this study was to evaluate the effectiveness of one such approach using the game of chess. Chess is a board game in which a winning strategy relies on logic and spatial reasoning, two aspects that are also an integral part of mathematics. Because of this, chess was an ideal vehicle for this study. We had 45 students in grades 3-6 participate in this study. Participants received 8 weekly sessions of chess instruction and peer chess play. The chess curriculum did not include any explicit mathematics instruction. Data was collected using pre and post tests on the first and last sessions. Tests measured student's ability to solve grade level appropriate word problems, logic problems, and arithmetic. Students showed increased accuracy solving word problems and logic problems. Student performance of arithmetic did not show significant change.

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