

# The Effect of Play-based Learning Methods on Math Learning of Sixth-grade Elementary Students

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## **Abstract**

Nowadays, it has become more difficult for teachers to attract students to the curriculum due to many factors that entertain students. Hence, teachers need to think about teaching methods that indirectly motivate students to learn. Moreover, this need is more felt in mathematics because it requires the constant creation of new cognitive structures. Therefore, one of the effective teaching methods for this demand is teaching with the help of various games. For this purpose, the present study investigated the effect of play-based learning methods on math learning in sixth-grade students. The results of this study were collected from experiments on control and experimental groups. The statistical population, at first, all male students in the sixth grade of primary school in the city of Karaj were considered for the academic year 2021-2022. Then, by cluster sampling, it was reduced to one school and finally, randomly, to two classes of 30 people. The control group was trained by the usual method of the teacher's explaining and then solving the book's exercises. The training of the experimental group was done by the simulation game of bank and supermarket space. In this method, students calculated discount percentages during their play and learned lesson points. In the end, the same tests were taken from both control and experimental groups and the average scores of students in both groups were obtained. The results of research data showed that the game-based teaching method has a positive effect on students' math learning compared to teaching by teacher's lecture.

**Keywords:** math learning, play-based teaching methods, traditional teaching method