

ABSTRACT:

This thesis focuses on the Abaku game. Abaku is a game with numbers similar to Scrabble. The aim of the thesis was to find out whether there is a relation between playing the Abaku game and pupils' numerical skills and their understanding of mathematical operations. 843 pupils (401 players and 442 non-players) from 10 schools were tested in total. Data were collected through questionnaires and 2 tests. The questionnaire surveyed the popularity of and success in mathematics and whether the pupil was a player. In such a case, the questionnaire looked at how often a player plays and how many years he has been playing. The first test focused on the relation between playing Abaku and numerical skills and the second between Abaku playing and understanding of additive and multiplicative operations. The statistical survey was used to verify the validity of the established hypotheses. I filled the data into Excel and Minitab, where I used analytical tools. I searched for the relation between being a player, the liking of mathematics, the success in mathematics, the number of test points earned, the test completion speed, the playing frequency and the number of years played. Most of the results are sorted by grades. The research did not show any significant influence of playing Abaku on the numerical abilities of pupils, neither numerical counting speed nor understanding of additive and multiplicative operations. Research has confirmed the relationship between the grade and the liking of mathematics and success in it which has already been shown in other research. The higher the grade of the pupils the less they like mathematics, and the less successful they are in mathematics. The thesis is completed with research results, discussions and recommendations for further research.