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Physical Activity Improves Mental Rotation Performance

PDF (Size: 229KB) PP. 58-61 DOI : 10.4236/ce.2010.111009

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ABSTRACT

Even there seemed to be general knowledge that physical activity enhanced spatial cognitive performance almost none experimental studies on this influence exist. For that the influence of physical activity on mental rotation performance is investigated in this study. Mental rotation is the ability to imagine how an object would look if rotated away from the original orientation. Two groups of 44 students of educational science each solved a psychometrical mental rotation task with three-dimensional block figures. After this, the participants of the physical activity group took part in a sport lesson, whereas the participants of the cognitive activity group attended an oral lesson of kinematics. Both lessons took 45 minutes. Thereafter, all participants solved the mental rotation task again. The results showed that the participants of the physical activity group improved their mental rotation performance whereas the participants of the cognitive activity showed no improvement.

KEYWORDS

Physical and Cognitive Performance, Pedagogic Implication

Cite this paper

 Jansen, P. & Pietsch, S. (2010). Physical Activity Improves Mental Rotation Performance. *Creative Education*, 1, 58-61. doi: 10.4236/ce.2010.111009.

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