

An Experiment on the Impact of TRIZ-Inspired Thinking on Solving Insight Problems

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Abstract. Insight problems (problems requiring to restructure the mental representation of the problem in order to find a solution) are notoriously difficult to solve. Previous studies have used mostly problem-specific hints to improve problem solving performance. However, ideally a more general sort of training could be developed in order to increase solution rates. The present study tested whether a short intervention could be effective in facilitating problem solving performance for a battery of different problems. Specifically, it addressed the question whether referring to generic TRIZ concepts instead of problem-specific hints could support the problem solving process.

Two groups of participants were exposed to 16 video clips of magic tricks as problem solving tasks and had to find out how each trick was accomplished. The experimental group (19 students) had been taught about selected TRIZ techniques while a control group (25 students) attempted the problems without any training. Results showed that the experimental group solved more problems correctly than the control group, indicating the effectiveness of the intervention.

Keywords: insight problem solving, constraint relaxation, restructuring, TRIZ, smart little people, operational space.