Enhancing Creative Problem Solving and Creative Self-Efficacy: A Preliminary Study

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Creative Problem Solving
A model of creativity which addresses open-ended problems via a set of stages, including: identifying problems, producing ideas, and turning those ideas into useful solutions (Puccio et al., 2006).

Creative Self-Efficacy
The degree of confidence an individual has in their ability to be creative (Fiore & Farmer, 2003). Creative self-efficacy has been argued to be an important factor in the creative process (Puente-Díaz, 2016).

Introduction
- Creative self-efficacy and creative performance have been shown to have a positive relationship (see Puente-Díaz, 2016, for a review).
- C.P.S. (creative problem solving) training is considered to be one of the most successful ways of training creativity (Puccio, Wheeler, & Cassandro, 2004).
- Being able to improve C.P.S. skills are therefore considered important in a variety of fields such as education (see Murdock, 2003) and business (see Thompson, 2003).
- However, of the large variety of tools available for training C.P.S. skills, only a few have been empirically supported (see Vernon et al., 2016, for a full review).
- Additionally, although there are creativity interventions which have been shown to improve C.P.S. skills (e.g., DeHann, 2009; Ma, 2006; Scott et al., 2004a, 2004b), and creative self-efficacy and creativity (e.g., Byrge & Tang, 2015), Vernon et al. (2016) point out that:
  - It is not always clear what tools are being used
  - It can be difficult to untangle the effect that each of the different tools are having.
- This current study therefore aimed to address this.

Research Question
Does an 8 week CPS training program utilising an empirically based creativity toolkit improve students’ creativity, creative self-efficacy, and C.P.S. skills?

C.P.S. Training Program

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2 and 3</th>
<th>Week 4</th>
<th>Week 5 and 6</th>
<th>Week 7 and 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to C.P.S.</td>
<td>Creative Problem Solving (C.P.S.)</td>
<td>Formative Q and A</td>
<td>Creative Ideation</td>
<td>Creative Evaluation</td>
</tr>
<tr>
<td>1 x 2 hours</td>
<td>2 x 2 hours</td>
<td>1 x 2 hours</td>
<td>2 x 2 hours</td>
<td>2 x 2 hours</td>
</tr>
</tbody>
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Output
Creativity assignment
Presentation using C.P.S. on a real world problem of their choice

Method

**Week 1 (Time 1)**
- Motivation: No significant difference from Time 1 to Time 2, t(18) = 1.59, p = .130

**Weeks 2-7**
- CPS training programme: 2 hours a week Utilising an empirically based creativity toolkit

**Week 8 (Time 2)**
- Motivation: No significant difference from Time 1 to Time 2, t(5) = 2.00, p = .102

Limitations
- Control group was too small to enable direct comparisons with the experimental group.
- Fluency was the only measure of creativity was used. Does not therefore tell us about other measures of creativity such as elaboration (e.g., Byrge & Tang, 2015), and quality and originality (e.g., Vernon & Hocking, 2014).
- The experimental group scored lower on measures of C.P.S. and creativity at time 1 compared to controls.
- The experimental group were a self-selected sample interested in creativity.

Conclusions
This study offers preliminary support for the use of an empirically based creativity toolkit for enhancing creative problem-solving skills and creative self-efficacy but a follow-up study utilizing a larger control group is recommended.

References


For further information
http://cccupsychology.com/creativitycognition/