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Learning**
Conference

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TAMRA STAMBAUGH

SATURDAY 19 MAY

Session 1

**Thinking Outside the Box:
Creative Thinking in the Classroom**

MELBOURNE

DR TAMRA STAMBAUGH

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Creativity

“Creativity is a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; identifying the difficulty; searching for solutions, making guesses, or formulating hypotheses about the deficiencies; testing and retesting these hypotheses and possibly modifying and retesting them; and finally communicating the results.” (Torrance, 1974, p. 8)

Creative Components Include:

- Novelty
- Usefulness/Appropriateness
- Social Context
- Articulation
- Quantity to Quality
- Timing
- Time
- Content Knowledge
- Practice

Componential Model of Creativity

Task Commitment
Creative-Relevant Processes
Domain-Relevant Skills

Amabile, 2012, Plucker, J. (ed) (2017).
 Creativity and innovation. Waco, TX: Prufrock Press.

Creativity is PROBLEM SOLVING. To achieve any challenging end in creative production we must have criteria, gauges, models, principles, and tests to use when judging whether or not we are approaching the end. (From criticalthinking.org)

Creative Problem Solving Model

Osborn & Parnes, 1990; Isaksen & Treffinger, 2005

- Understand and Identify the Real Problem
 - What is the goal, opportunity, or challenge?
 - What is the real problem to be solved?
 - What do I need to know to solve the problem? (perspectives, facts, ideas)
 - How can I state that problem clearly? In what ways might we...
- Generate Ideas
 - How many ideas can I generate that are associated with the problem?
 - What methods can I use to generate ideas?
 - What else do I need to know or learn?
- Find Solutions
 - What criteria do I need to create?
 - What is the best solution based on criteria?
 - How can I refine ideas as needed?
- Build Acceptance
 - What are my action steps?
 - What difficulties might I encounter?
 - What materials, people, and other resources are needed?

Divergent Thinking Model

(Torrance, 1979)

- Fluency
 - How many ideas can be generated?
- Flexibility
 - How many different ideas and categories are represented?
- Elaboration
 - To what extent can the various ideas and categories be explained and illustrated in detail?
- Originality
 - How are these ideas different from the mainstream?

Cognitive Strategies

- | | |
|--------------------------|---|
| • Metaphorical Thinking | How is x like y? |
| • Symbolic Thinking | Create a symbol that represents..... |
| • Analogic Thinking | A is to B as X is to |
| • Remote Association | cutter, dough, dozen = cookie |
| • Conceptual Combination | noun-noun combinations |
| • Imagery | How is ___ like a ___? Imagine ___ as a ___ |

Sample Classroom Applications for Using Creative Problem Methods in the Classroom

- Read a picture book about clean water in third world countries and follow the Creative Problem Solving model to analyze the main problem in the story and solutions for solving those while simultaneously learning about the water cycle.
- Read an article on the overpopulation of the brush turkey, generate ideas for solving the problem, and then use the Creative Problem Solving Model to analyse their ideas.
- Use imagery to explain how the development of a character is like a photo frame.
- Apply Torrance's model of fluency, flexibility, elaboration, and originality to analyze a piece of art.
- Use Torrance's model to represent the number 48 in multiple ways.
- Student create metaphors to compare/contrast historical scenarios and real world events.

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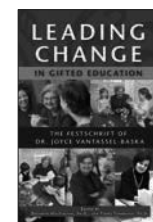
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