

# Creative Thinking Workshop

THINK Faculty Workshop  
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what is ***CREATIVITY*** ?

# Testing Creativity

**Creativity Tests (including TTCT- Torrance Test of Creative Thinking) measures creativity primarily by discrete, non-judgmental tasks that focus on:**

- **Fluency of thought** – number of alternatives generated
- **Flexibility of thought** -- diversity of topics/types represented in alternatives
- **Originality of thought** -- statistical rarity of the responses
- **Elaboration of one's own thinking** -- the ability to add details and fill in the gaps

*TTCT Test Developed by Ellis Paul Torrance building on the work of J.P. Guilford in 1996 and has been renormed 4 times since.*

*Swartz, R. (1987). Teaching for thinking: Developmental model for the infusion of thinking skills into mainstream instruction. Teaching Thinking Skills: Theory and practice. New York, NY: W.H> Freeman and Company.*

# Testing Creativity: TTCT

## Starting Shapes

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Use



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Combine










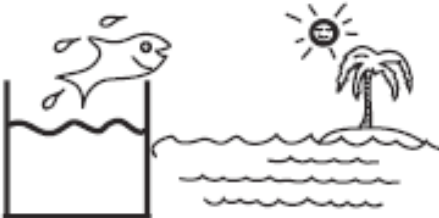

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Complete



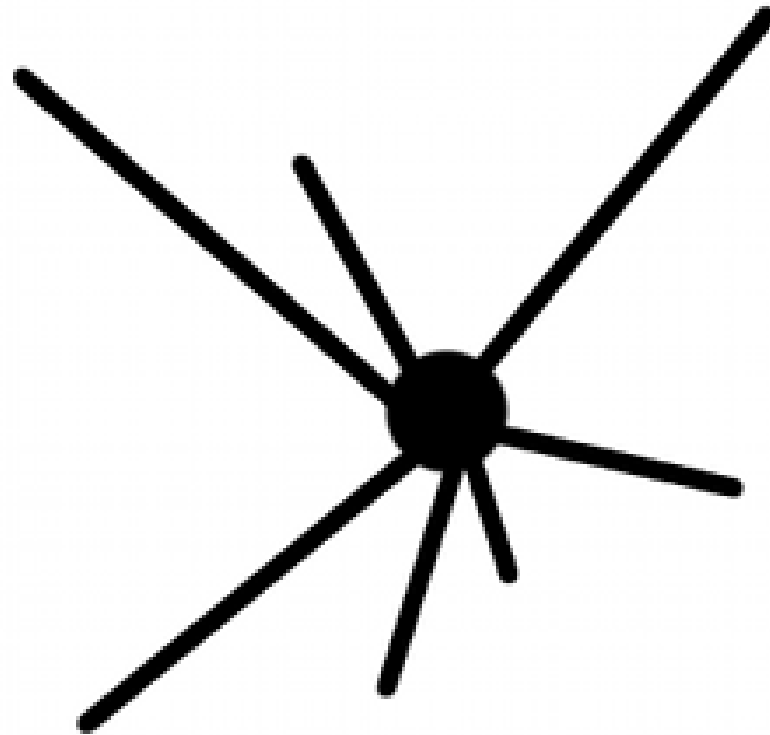
*Sample TTCT question Developed by Ellis Paul Torrance.*

# Testing Creativity: TTCT

	Starting Shapes	Completed Drawing	
		More Creative	Less Creative
Use		 Mickey Mouse	 Chain
Combine		 King	 Face
Complete		 A fish on vacation	 Pot

*Sample TTCT question Developed by Ellis Paul Torrance.*

# Testing Creativity: TTCT



*Sample TTCT question Developed by Ellis Paul Torrance.*

# Expanding What Defines Creativity

In addition to having eccentric or unique thoughts- **creativity involves preparation, incubation, insight, evaluation, and elaboration.** (1)

Judgements about the **appropriateness and usefulness of ideas** and the ability to be **adaptive within task constraints** are essential criteria for creative thinking. (2)

It is important for creative thinking **to move across vehicles of thought**, from numbers to verbal language to visual imagery. (3)

1. Csikszentmihalyi, M. (1996). *Creativity: Flow and the Psychology of Discovery and Invention*. New York, NY: Harper Collins Publishers pp27-28

2. Sternberg, R., Lubart, T. (1999). *Concepts of creativity: Prospects and paradigms*. *Handbook of Creativity*. New York, NY: Cambridge University Press.

3. McKim, R. (1972). *Experiences in visual thinking*. Monterey, CA: Brooks/Cole, p.2

# QEP Definition of Creative Thinking

“Creative Thinking is generating **new ideas within or across domains** of knowledge, **drawing upon or intentionally breaking with established symbolic rules** and procedures. In the context of college teaching and learning, creative thinking, deliberately and **actively engages** students in bringing together existing ideas into **new configurations**, developing **new properties or possibilities for something that already exists**, and discovering or **imagining something entirely new.**”



# Creative Thinking Behaviors

**Creative Thinking Process Behaviors include:**

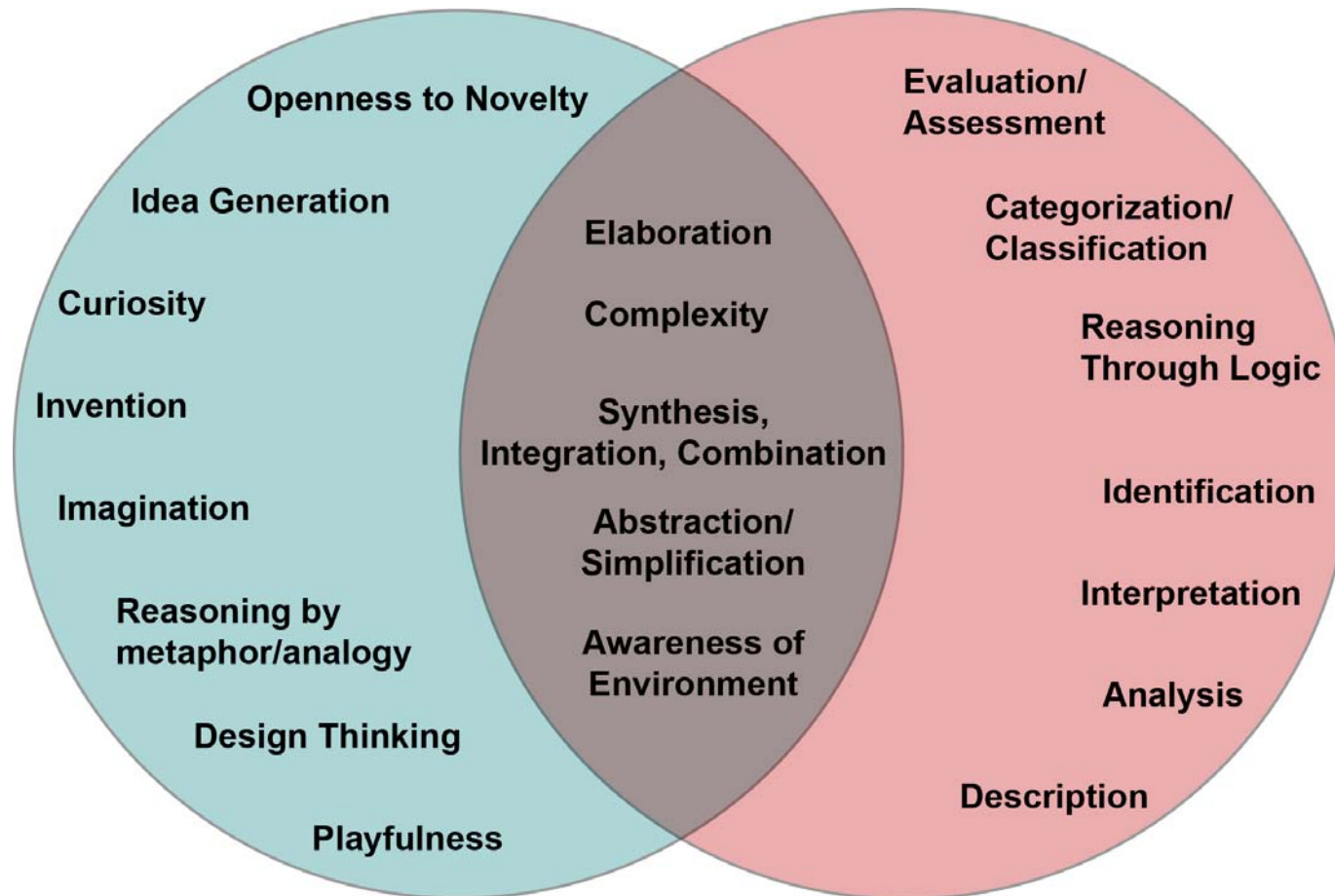
- **Raising Questions, Formulating Problems, Understanding Context**
- **Gathering and Assessing Relevant Information**
- **Synthesizing and Generating Multiple Ideas**
- **Considering Alternatives**
- **Reaching Reasoned Conclusions and Choosing a Solution or Approach**
- **Effectively Communicating and Elaborating**

# Creative Thinking Intellectual Standards

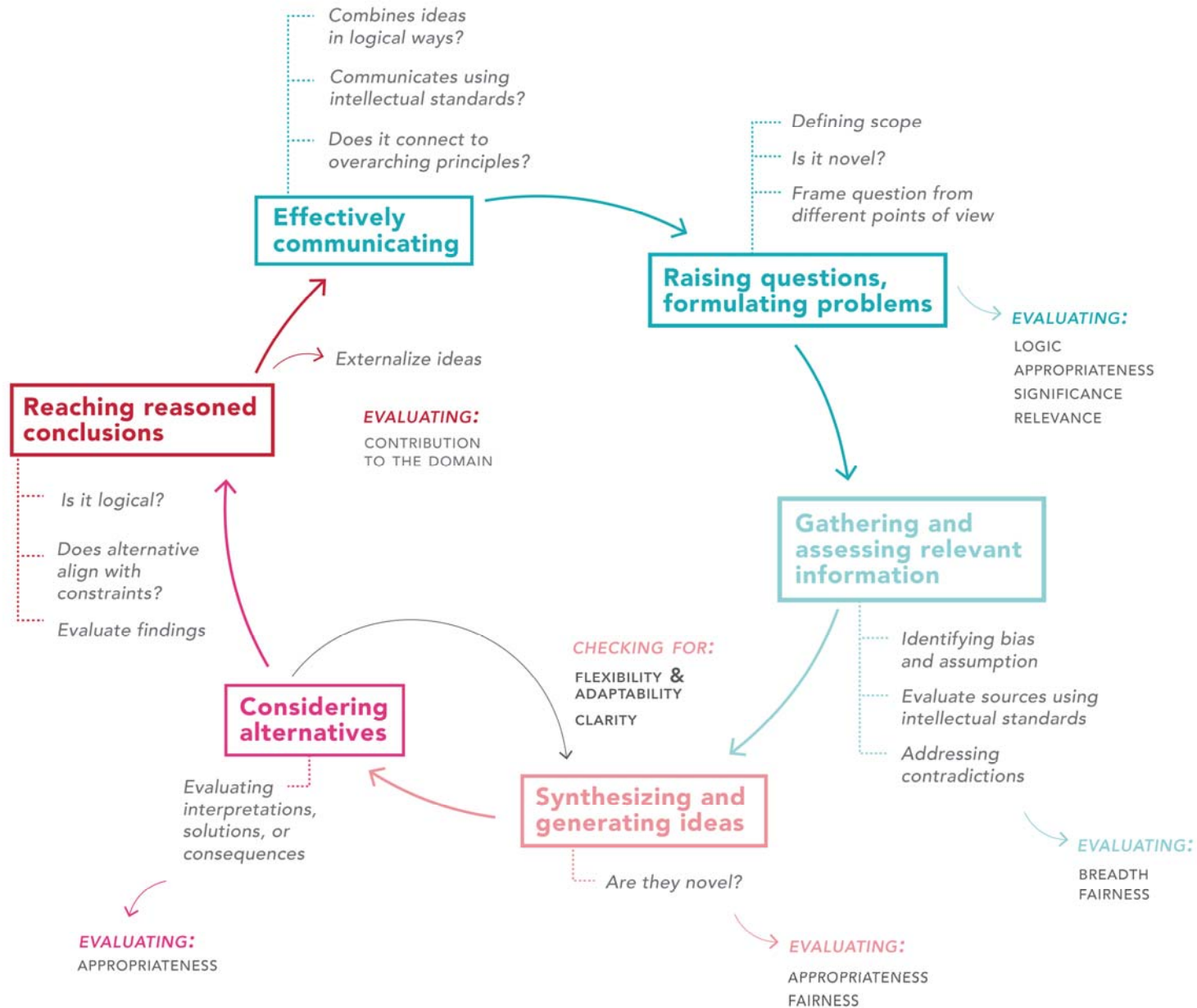
The intellectual standards for judging Creative Thinking are:

- **Originality** – constructive imagination and independent thought.
- **Adaptability and flexibility** – the ability to adjust thinking under new or unstable conditions and to move among various vehicles of thought (numerical, linguistic, visual) depending on the situation or context.
- **Appropriateness** – goodness of fit between the constraints of the problem and the properties of the solution.
- **Contribution to the domain** – the accepted worth of new ideas within the discipline.

# Creative Thinking / Critical Thinking



*The Relationship between Critical and Creative Thinking, from The Five Colleges of Ohio Creative and Critical Thinking Project*



# TH!NK Video

# Domain-General versus Domain-Specific

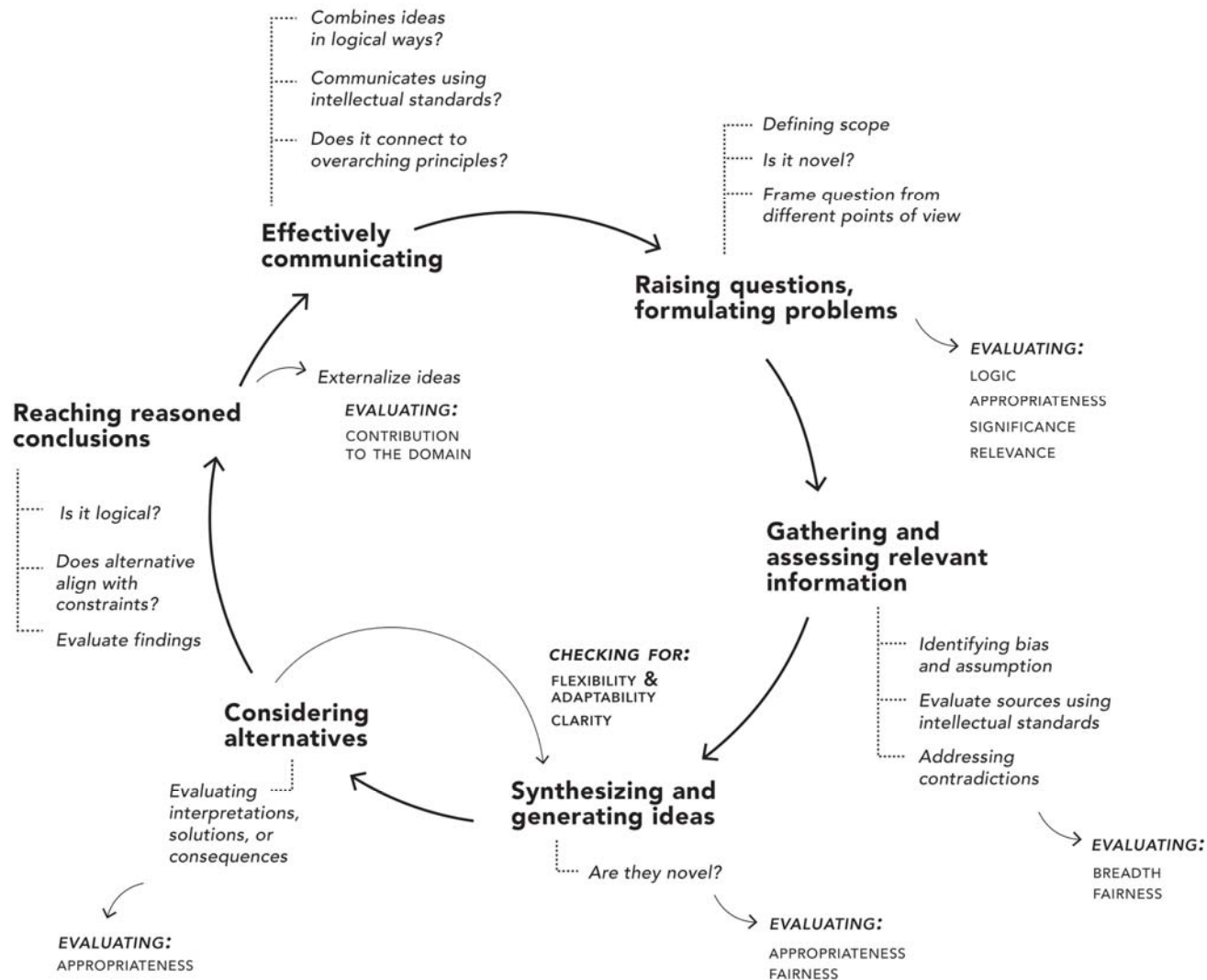
Creativity-relevant **processes apply to anyone**, but domain-relevant skills and task motivation show greater disciplinary specificity. (1)

Creativity is **both domain-general and domain-specific**. **Contextual factors influence definitions** and the weight given by different disciplines to novelty and **constraint satisfaction** (art tends to assign greater importance to novelty, engineering values the satisfaction of constraints). (2)

1. Amabile, T. (1996). *Creativity in Context*. Boulder, CO: Westview Press.

2. Lubart, T., Guignard, J. (2006). *The Generality-Specificity of Creativity: A Multivariate Approach. Creativity: From Potential to Realization*. Washington, DC: American Psychological Association.

# Tailor to Behaviors in Your Discipline



**Behaviors**

**Assignment Ideas**

**Raising Questions, Formulating Problems**

*Understanding context in order to frame the problem scope – involvement in a set of issues that arouse curiosity and come from the specific requirements of the domain in the form of a problem, challenge, or issue at hand.*

*Evaluating: Logic, Appropriateness, Significance, Relevance*

**Gathering and Assessing Relevant Information**

*Analyzing and evaluating information/further framing and articulating the problem/issue scope and collecting and analyzing information.*

*Evaluating: Breadth, Fairness*

**Synthesizing and Generating Ideas**

*Synthesizing information and generating multiple solutions to the problem – occurs during a period of time in which ideas percolate relevant and sometimes irrelevant associations, according to patterns established by the thinker's knowledge of the domain. Idea generation requires synthesizing concepts and information, often in original configurations.*

*Evaluating: Appropriateness, Fairness, Originality*

**Considering Alternatives**

*Exercising insight about alternatives and choosing a solution – when one of these associations fits the problem so well (i.e., is appropriate) that it springs to consciousness. The thinker monitors developing work, pays attention to goals and feelings, compares ideas to domain knowledge and methods, and interacts with others involved in solving similar problems.*

*Evaluating: Adaptability and Flexibility, Appropriateness*

**Reaching Reasoned Conclusions**

*Evaluating the worth and consequences of an implemented solution – critical judgments result in modifications to the original idea.*

*Evaluating: Contribution to the Domain, Appropriateness*

**Effectively Communicating**

*Elaborating – when the thinker develops convincing modes of presentation that communicate ideas to others*

*Evaluating: Clarity, Originality, Logic, Significance*