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**Creativity Within Constraints**  
 Kristin Fontichiaro  
 Richardson ISD  
 11/1/2012, 9:45 – 10:45am

**Agenda**

- Creative Expression vs. Creative Thinking
- Challenges for Implementation
- Practical Application

**Turn and Talk:**

What made Steve Jobs special?

**Share Out**

**Creativity.**

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    graph TD
      Creativity --> CreativeExpression[Creative Expression]
      Creativity --> CreativeThinking[Creative Thinking]
    
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**Why does the difference matter for you as a school leader?**

<p><b>Creative Expression</b></p> <ul style="list-style-type: none"> <li>• Perceived by many teachers as achievable by merely "doing stuff" (e.g., "draw a picture," "make up a song" with little metric for success)</li> <li>• Most teachers are not artists and do not know how to teach aesthetic skills</li> <li>• Often erroneously defined by tools, not process (e.g., "Use markers," "Add glitter," "include pictures,")</li> <li>• Vague language → Vague Results</li> </ul>	<p><b>Creative Thinking</b></p> <ul style="list-style-type: none"> <li>• Defined by process and product</li> <li>• Defined by what was created, not the tools that were used</li> </ul>
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**Creative Thinking**

<p>Creating something new based on existing inspiration ("Standing on shoulders of giants")</p>	<ul style="list-style-type: none"> <li>• Dyson Vacuum</li> <li>• Hybrid Cars</li> <li>• Shakespeare cribbing from Marlowe</li> </ul>
<p>Mashing up ideas, products, and/or information from various sources and creating something new</p>	<ul style="list-style-type: none"> <li>• Lady Gaga's Meat Dress</li> <li>• "God Bless America" song</li> <li>• "Hey, Girl" meme</li> </ul>
<p>Porting a perspective from one field/set of experiences into another, for new results</p>	<ul style="list-style-type: none"> <li>• Gamers using pattern-recognition skills to help scientists sort out how proteins fold</li> <li>• School walkthroughs adapted from student roundups</li> </ul>

**Creative Thinking**

- "Synthesis +"
- "Force your mind to *not* look analytically to provoke 'out-of-the-box' thinking" – D. Abilock
- Rarely spontaneous
- Often requires meticulous thinking, prototyping, testing, experimenting → Takes time



Challenges to Developing Creative Thinking

1. Attuned to emotions	1. Organized
2. Caring	2. Likes to set, follow rules
3. Thoughtful	3. On-time and dependable
4. Concerned about others	4. Efficient
5. Avoids conflict	5. Good follow-through
6. Doesn't want others to feel bad	6. Respects/follows authority

**Which Are You?**

1. Curious	1. Spontaneous
2. Mind over emotion	2. Adventurous
3. Logical	3. Free-thinking
4. Looks for patterns	3. Enjoy fun; playful
5. Interested in solving problems	4. Artsy
6. Thinker	5. Resists rules

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**The majority of your staff is ...**

1. Curious	1. Spontaneous
2. Mind over emotion	2. Adventurous
3. Logical	2. Free-thinking
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**Creative and innovative thinkers are...**

1. Curious	1. Spontaneous
2. Mind over emotion	2. Adventurous
3. Logical	2. Free-thinking
4. Looks for patterns	3. Enjoy fun; playful
5. Interested in solving problems	4. Artsy
6. Thinker	5. Resists rules

1. Attuned to emotions	1. Organized
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**True-Colors.com**

1. Curious	1. Spontaneous
2. Mind over emotion	2. Adventurous
3. Logical	2. Free-thinking
4. Looks for patterns	3. Enjoys fun
5. Interested in solving problems	4. Artsy
6. Thinker	5. Resists rules
	6. Playful

**Turn and Talk:**  
Based on this short exercise, what challenges do you see as your staff works to implement P21's 4C's?

Today's students are moving beyond the basics and embracing the 4C's -- "super skills" for the 21st century!

**Communications**  
Sharing thoughts, questions, ideas, and solutions

**Collaboration**  
Working together to reach a goal -- mixing ideas, expertise, and talents to work

**Critical Thinking**  
Looking at problems in a new way, trying learning across subjects & disciplines

**Creativity**  
Trying new approaches to get things done, making innovation & invention

<http://www.p21.org/storage/documents/4csposter.pdf>

**Challenge**

Many school personnel like authority and consistency and *dislike* messy, iterative, or non-linear work

**Creativity: Asset or Burden in the Classroom?**

Berk L. Wentby  
Department of Psychology  
Shippensburg College

V. L. Dawson  
Department of Psychology  
Shippensburg College

**ABSTRACT:** Two studies were conducted to examine teachers' perceptions of creative students. Study 1 was based on earlier works that identified personality characteristics associated with creativity. The personality traits associated with creativity as they appear in creative children were used to analyze the results. Classroom school teachers were then asked to rate their favorite and least favorite students based on these characteristics and to indicate whether or not they were creative and whether or not they were in a classroom setting.

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From the lit review, pp. 1-2:

"Research has indicated that teachers prefer traits that seem to run counter to creativity, such as conformity and unquestioning acceptance of authority ...

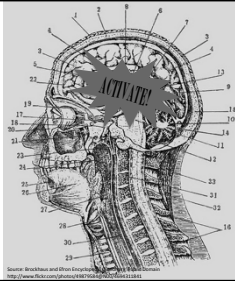
"The reason ... is quite clear ... creative people tend to have traits that some have referred to as *obnoxious* ...

"If teachers' concepts of creativity are different from those generally accepted, it seems unlikely they will recognize and nurture those students with creative potential."

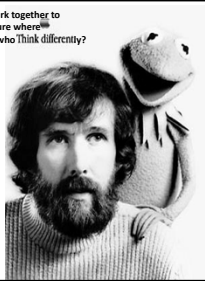
**Challenge:**  
If you are trying to build a 4C's kind of school, how do you shift a community that values peace, authority, and sequential thinking so they welcome students' messy creativity and innovation?




**How do we get folks who may not be right-brained to envision learning activities that encourage right-brained thinking?**



How do we work together to develop a culture where we value kids who Think differently?



READING PRACTICE TEST  
3: Reading Comprehension (cont.)  
Directions: Listen to your teacher read the sentences. Look at the pictures. Choose the sentence that matches the picture. Practice with example B. Do 3-6 the same way.




(F) Todd ate cereal.  
(G) I love my horse.  
(H) The weather is nice.

And how do we do that in a test-obsessed culture?

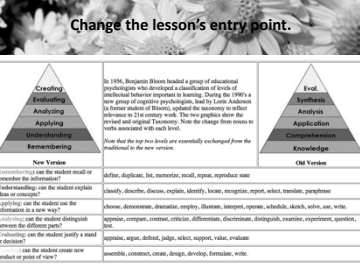


Forget About Flashy Tools. Give Teachers Strategies.

Strategy #1:  
Bloom's is Your Friend.  
(Nah, not flower blooms!)



Change the lesson's entry point.



**New York**  
Crawling  
Evaluating  
Analyzing  
Applying  
Understanding  
Remembering

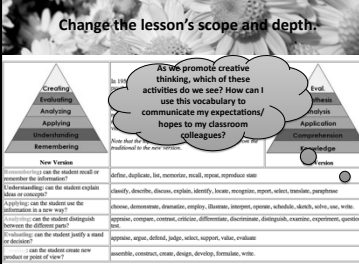
**Old York**  
Eval  
Synthesis  
Analysis  
Application  
Comprehension  
Knowledge

In 1966, Benjamin Bloom headed a group of educational psychologists who developed a classification of levels of intellectual behavior important to learning. During the 1990s a new group of cognitive psychologists, headed by Lyle E. Margolis (a former member of Bloom's), updated the taxonomy to reflect advances in 21st century work. The new pyramid shows the revised and original Taxonomy. Note the change from nouns to verbs associated with each level.

How does the top two levels are essentially exchanged from the pyramid to the new version.

[http://www2.ou.edu/educ/overbaui/Bloom/Blooms\\_taxonomy.htm](http://www2.ou.edu/educ/overbaui/Bloom/Blooms_taxonomy.htm)

Change the lesson's scope and depth.



**New York**  
Crawling  
Evaluating  
Analyzing  
Applying  
Understanding  
Remembering


**Old York**  
Eval  
Synthesis  
Analysis  
Application  
Comprehension  
Knowledge

As we promote creative thinking, which of these activities do we see? How can I use this vocabulary to communicate my expectations/hopes to my classroom colleagues?

[http://www2.ou.edu/educ/overbaui/Bloom/Blooms\\_taxonomy.htm](http://www2.ou.edu/educ/overbaui/Bloom/Blooms_taxonomy.htm)


Bloom's Tips

- Bloom's is not a sequential ladder!
- Bloom's documents different kinds of learning but **does not require** that one level be mastered before moving to another.
- Students are not empty vessels. Build on their prior knowledge!




**Bloom's In Action**

- **Before:** List the characteristics that define a mammal.
- **After:** The OurSchool Video Club is working on animations for an upcoming school broadcast. They need a new mammal! Draw and label a *new mammal* that doesn't yet exist. Label the parts that make it a mammal.




**Strategy #2:  
Problem-Based Learning**

"Here's an authentic problem ... how might you solve it?"




- The problem should be as authentic as possible.
- The problem should not have an obvious solution – your teachers can model genuine uncertainty.
- The proposed solution should be defended with evidence from text, hands-on inquiry, or other areas.




- **Before:** Write a report about a form of alternative energy.
- **After:** Although Texas is an oil-rich state, the demand for oil alternatives is rising throughout the country. To stay competitive for future generations, what alternate forms of alternative energy should be investigated in your region and why?



**Space**



- Give students access to the necessary historical information.
- Prioritize summarizing over paraphrasing of information.
- Consider the power of role-play, character construction, and point of view.



- **Before:** Answer the questions about the Boston Massacre at the end of the chapter.
- **After:** You are the Town Crier the evening of the Boston Massacre. Based on what you have learned from your chapter, construct a 50-word summary of what happened that night.

"You are there" Strategy

Requires students to summarize not what, but they must know the low-level facts in order to complete the task.



**And That's Just The Tip of the Iceberg...**



**Questions?**  
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21st-CENTURY LEARNING