How Do I Love Thee: A Synthesis in Three Part

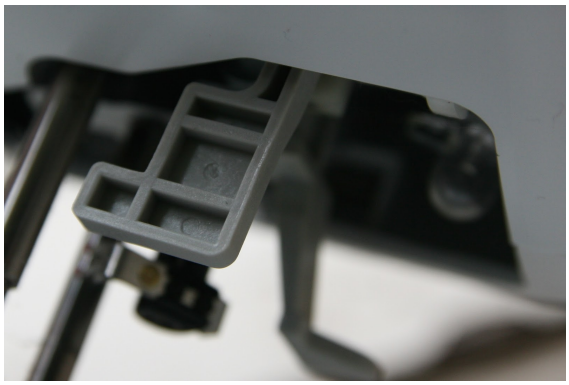
Part I: White Paper

I once sat in the family room of my house and sewed spray painted plastic lids in neat lines onto colored shirts, and then I gave the shirt to my sister to wear. In an instant, she became a fish. She likely sat next to me and glued uncooked pasta onto a lettuce keeper, clearly creating mysterious treasure found at the bottom of the ocean. I did cartwheels around the living room, and twirled my way into my imagination that had me at the Olympics. At school, I often found myself in the band room, creating music on steel drums as often as I could, and the memory of writing music with one of the nation's premier steel drum composers is not one that will soon leave me. I drew the word "bored" in circles, creating a pattern that helped me pass the minutes while thinking of new ideas. I took dozens of rolls of film on family vacation and could not wait to get them developed. Somewhere in there though I lost the freedom to do these things all the time, and I never thought about the ways they prepared me to be successful. Nor did I think about the ways that I should be certain that my students learn these tools and more, for these students were not yet in my mind. After all, today, I am not a seamstress. I am not an Olympic gymnast. I am not in a world famous steel band, and I am not a professional photographer. I do, however, sew, create music, play, and take photographs, and it has become clear to me that all of these things have made me the educator and leader I am today. Some of these same tools that I used as a child can be cultivated in my students to transform their education and my role as a leader.

With the exception of drawing in class, none of the examples above happened in a classroom. Imagine what could be possible if educators broke from the common mold that students should sit in classes, acquire new information that will lead them to make contributions to that specific field as adults. It is also quite possible that schools today

operate in ways that actually hold back students from all that they could accomplish, or fully understand. When exploring the complex topic of leadership in ancient and modern China, for instance, it became clear that students as young as middle school could begin to understand this topic if presented with seven thinking tools that promote creativity. For a topic that is of utmost importance to the global community in the 21st century, it is powerful to consider that creativity could actually be part of the answer to helping to create better global citizens who will make contributions of which we have not yet dreamed. There is no reason why these thinking tools should be bound to one subject area. Indeed, seven thinking tools can transform education. Integrating perceiving, patterning, abstracting, embodied thinking, modeling, and play into all subject areas could lead to deeper understanding, new ideas that are effective and whole, and more engagement from students. It could be that simple.

While any one of these thinking tools can be a valuable addition to a classroom, students who learn the way these tools relate to each other to create rich and meaningful experiences will be more ready for success beyond formal schooling (Root-Bernstein, 1999, p. 323). For some topics, like leadership in ancient and modern China, it can be overwhelming for students to see beyond grand generalizations. Even these can be challenging because students are faced with new terms that they do not use in other facets of their lives. Inevitably, important ideas will be missed, just like the pieces of a sewing machine that can be overlooked when looking at the whole object.

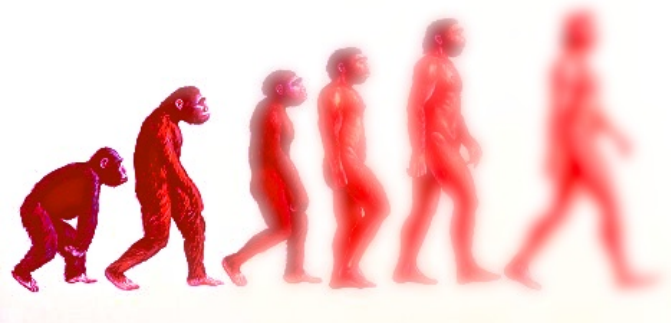


Even the photo of the whole sewing machine is not nearly as interesting as the other photographs. Student interest could be found in the integration of these thinking tools, and

connections across disciplines are more likely to happen, leading to innovation and new ideas.

These seven tools move educators in the direction of opening their classrooms to be transdisciplinary settings that break down the walls that conform students to think about history in room 203, math in room 211, and science in room 100. When examining the use of these tools through the lens of leadership in ancient and modern China, one can begin to see

the ways that all of them together begin to create a picture that opens the possibilities to make connections to other places in the world, and other topics of study. While looking at the patterns in Chinese propaganda, and eliminating them from first glance, new patterns emerge and the people become the center of the image. Through abstracting the form of government in China, we find that there is an essence behind any specific form of government and begin to see the ways that China is in an ever evolving process. By using these thinking tools, students begin to see that China and the United States have much more in common than where the obvious differences often lead people. Perhaps here lies the foundation that will allow deeper understanding between these two nations, opening the way for more discussion around other deeply complex topics. Just as students need to see that China is more than



what first meets the eye, classrooms must become transdisciplinary with the freedom to perceive patterns, models, and abstractions that transform subject matter and bridge the gap between disciplines.

In order for creativity to be given the place it deserves in the classroom, it is necessary to release the idea that subject matter must be specific. Necessary details will still serve their purposes, but the notion that there is only one solution holds back students from seeing all of the possibilities. According to Robert and Michele Root-Bernstein in *Sparks of Genius* (1999), "students are far more likely to remember and apply what they have learned if information and skills are taught as generally useful rather than as unique solutions to unique problems" (p. 318). It is not the teacher's role to convince students to go into a specific field of study, but to give students the tools they need to be successful and discover new ideas no matter what they choose to do.

Most of students who sit in history classes will not become historians, and yet the work they do in these classes now when combined with creativity could lay the groundwork for powerful breakthroughs in other subject areas. It becomes the teacher's role to give up the control that attempts to place education in a neat box. By giving up control, educators can provide the space students need to play, to create, to make models, to move, to notice patterns, and to perceive the possibilities that these each have on any given subject matter. Sometimes this means giving control to the physical environment, and inviting students to change what is around them to support their best use of creativity. According to the Deep Play Research Group at Michigan State University, one of the most important things that can be done is "to closely observe what [users] do - and then get out of the way. Sometimes, the most creative solution may be to step back and do nothing at all" (Mishra, Cain, Sawaya, Henriksen, & the Deep-Play Research Group, 2013, p. 9).

Giving up control does not have to mean chaos. Instead, educators become leaders and guides who put students in control of their learning. When applying these ideas to the exploration of the thinking tools in the context of ancient and modern Chinese leadership, suddenly poems about the terracotta warriors becomes more than re-imaging of the reconstruction of these ancient artifacts.

workers
around the clock
order out of chaos
putting together the pieces
leader

Using the seven thinking tools for creativity can lead to deeper understanding of a topic, but the result can also be to open up new ways of thinking about other topics. This is what is at the heart of the connections between the thinking tools, creativity, and courses of study. As can be seen through the lens of ancient and modern leadership in China, regardless of time and place, leadership is about people. Leadership is a process that evolves and often moves through cycles that rise and fall, and leadership is timeless. Without these thinking tools that can be applied to any discipline, this topic remains in a history classroom. The analogy to life outside of the topic is lost, and the powerful implications it presents for leaders anywhere become nothing more than knowledge about China's past and present. The connections to leadership in education would not be seen, yet they are there all along. Again, the terracotta soldiers have something to teach us.

leader
building to last
not to toil in vain
forming new paths for the future
artist

By teaching students to use seven thinking tools across disciplines, educators move in the direction of educating the whole child. Imagine what it literally looks like to educate only part of a child. When perceived this way, it is hard to believe that any educator would be satisfied with this notion. Yet half-understanding thinking, teaching, and learning is what happens in nearly every school in the United States (Root-Bernstein, 1999, p. 12). It has become clear that experiencing an abstract, complex topic in multisensory ways through the seven thinking tools can unleash a vast array of new ideas and possibilities, creating a whole picture, but also allowing one to be a whole person. Indeed, "the point of education must be to create whole people who, through their wholeness, can focus the accumulated wisdom of human experience into illuminated patches of splendor" (Root-Bernstein, 1999, p. 326).

In order to fully embrace creativity through these seven thinking tools and teach the whole child, educators must see the ways in which it is imperative to change how they teach. Even this idea calls for the use of creative thinking tools. While sewing plastic lids onto a shirt was not a part of any class, there is no reason why it could not be. Root-Bernstein (1999) says, "out of youthful enthusiasms and mature interests, the creative individual interleaves vocations and avocations that together stimulate imagination and innovation" (p. 322). Educators do not know what their students will do as adults or how their childhood interests will serve them later in life. It is possible, however, to develop creative thinkers that use tools such as perceiving, patterning, abstracting, modeling, and play to explore possibilities and see innovations that lead to meaningful breakthroughs no matter where they choose to go as adults.

References:

Mishra, P., Cain, W., Sawaya, S., Henriksen, D. & the Deep-Play Research Group (2013). A Room of their own. Tech Trends, (57) 4. p. 5-9.

Root-Bernstein, R. & M. (1999). *Sparks of Genius: The 13 Thinking Tools of the World's Most Creative People*. New York: Houghton Mifflin Company.