Thinking Outside the Square

Cultivating Adult and Youth Creativity

By Lisa M. Sensale Yazdian and Betsy Diamant-Cohen

***Lisa M. Sensale Yazdian**, PhD, is an educational psychologist with experience supporting birth-adult learners in libraries and beyond. She currently manages education and engagement efforts at CET (PBS). **Betsy Diamant-Cohen**, ALSC's 2022 Distinguished Service Award winner, is a children's librarian with a doctorate, an early literacy trainer, consultant, and author. She is known for translating research into practical activities with developmental tips and presenting these via webinars, engaging workshops, and online courses.*

Although we have experienced great advances in scientific and technological knowledge over the decades, research suggests that the pace of innovation is slowing down. Creativity is "the process of having original ideas that have value,"[1] yet a recent article surveying decades worth of data and patents reports that innovative papers and patents in science and technology are becoming less disruptive over time.[2]

Since 1990, children have experienced compelling losses in scores on the Torrance Tests of Creative Thinking (TTCT).[3] In 2010, educational psychologist, Kyung Hee Kim coined the term "creativity crisis" to refer to this steady decline.

Having a creative thought and following it through with action is what has enabled humans to evolve. Without creativity, we would not have vaccines to combat illnesses, we would not have flush toilets, and we would not have libraries with electronic check-out systems. Creativity gives us the ability to face new problems and the courage to envision and try different solutions until we find the right one.

Diminishing creativity is a crisis, but libraries can be champions for its revival. The resources shared in this column unpack creativity, address misconceptions, and share strategies for nurturing creativity in adults and children. We even share some of our favorite picture books on the subject.

Creativity, Education, and Innovation

The Runaway Species: How Human Creativity Remakes the World

bit.ly/41UfauC

David Eagleman and Anthony Brandt's *The Runaway Species: How Human Creativity Remakes the World* uses real examples from the arts and sciences to describe how humans have been able to innovate throughout history.[4] They explain three cognitive operations that facilitate the development of new ideas: bending (taking something original and twisting it out of shape); breaking (taking something completely apart); blending (merging two or more sources). They also describe the importance of having a creative mentality, along with the need to build and rebuild ideas (even if they're already good), generating a lot of options, moving beyond accepted standards, and engaging in risk taking. The book concludes with examples of outside-the-box thinking from business and education.

TEDxTucson George Land

bit.ly/41ND8HA

In this talk, George Land provides an overview of the history of innovation and the importance of creativity. In an effort to understand the origins of creativity, Land and his team administered an Imaginative Thinking test to children to look at their ability to take a problem and come up with new and imaginative solutions. They found that 98% of five-year-olds fell into the "genius" category of creative thinking. When they were tested at age 15, that number dropped to

12%. Only 2% of adults tested fell into that category. Land posits that educating youth to use divergent (imaginative) thinking and convergent (evaluative) thinking at the same time diminishes their ability to be creative because the neurons keep fighting each other and can no longer freely operate as they would in the mind of a five-year-old.

Why Is Creativity Important in Education? | A Conversation with Sir Ken Robinson

bit.ly/3LERcO6

Sir Ken Robinson provides an explanation for why creativity is overlooked in education and highlights the economic imperative for teaching creative thinking in schools. In addition to having a less creative workforce, the world is becoming more complicated, nuanced, and interconnected, and we need to find better ways of living together. Creativity is also needed to help people find their passion and purpose.

Children, Creativity, and the Real Key to Intelligence

bit.ly/427a9hL

Alison Gopnik explores why children seem to be so much more creative than adults in this piece for the Association for Psychological Science (APS) and juxtaposes children's "common-sense learning capacities" with artificial intelligence (AI). Unlike machines, children are abstract thinkers who build "intuitive theories of physics, biology, and math, and of the psychological and social world, too." They are also active learners, who experiment and somehow "find the creative sweet spot between the obvious and the crazy."

Nurturing Creativity

Sir Ken Robinson—Can Creativity Be Taught?

bit.ly/3HmHz4f

Sir Ken Robinson defines creativity and maintains that it's possible to be creative at anything; creativity is not just limited to the arts. He explains that if teaching is about giving people tools, opportunities, and mentoring, then creativity can be taught and assessed. The criteria we use to assess originality and value, however, will differ according to age and subject, but once identified, can become part of a curriculum.

Ten Tips for Cultivating Creativity

bit.ly/3LiKj3w

Michael Resnick, professor of learning and research at MIT Media Lab, shares practical information for cultivating creativity from his book *Lifelong Kindergarten: Cultivating Creativity through Projects, Passion, Peers, and Play*.[5] The premise of his work is that creativity is an iterative process already utilized by our youngest learners. He refers to this process as the Creative Learning Spiral, which consists of five components: imagine, create, play, share, and reflect. Resnick shares ten strategies for helping children through each of the stages: show examples to spark imagination; encourage messing around; provide a wide range of materials (traditional materials and new technologies); embrace all types of making; emphasize the process, not the product; extend time for projects; help children find others to work with; get involved as a collaborator; ask authentic questions; share your own reflections.

Picture Books that Spark Creative Thinking

Journey by Aaron Becker
How to Draw a Happy Cat by Ethan Berlin
There's a Witch in Your Book by Tom Fletcher
Lots of Dots by Craig Frazier
Hey, Bruce! An Interactive Book by Ryan T. Higgins
Harold and the Purple Crayon by Crockett Johnson
Going Places by Paul A. Reynolds and Peter A. Reynolds
It Looked like Spilt Milk by Charles Green Shaw
Solutions for Cold Feet and Other Little Problems by Carey Sookocheff
Press Here by Herve Tullet
The Year We Learned to Fly by Jacqueline Woodson
What Do You Do with an Idea? by Kobi Yamada

The Cure for the Creativity Crisis

bit.ly/41LMXWM

The Cure for the Creativity Crisis provides a brief synopsis of the crisis and identifies three solutions given by Dr. Kyung Hee Kim: cultivating creative climates, nurturing creative attitudes, and developing creative thinking skills. The four creative climates needed for innovation are: soil (diverse resources and experiences), sun (inspiration and encouragement), storm (challenges), and space (freedom to dream). Twenty-seven attitudes (e.g., open-mindedness, curiosity, resilience, goal-setting) have been associated with creativity that help individuals navigate the different climates. Lastly, as Kim explains in her lecture,[6] the creative thinking process involves a set of stages and the use of convergent and divergent thinking as needed.

Five Ways to Boost Creativity on Your Team

bit.ly/3HrAEqj

Five simple strategies for supporting creativity are provided in this Harvard Business Review piece written by design professors: generate a lot of ideas, even if they might seem ridiculous; create a space for failure; provide time for thinking and exploration; look for problems; delay decisions until ideas have been shared and processed. &

References

1. Sir Ken Robinson, "Can Creativity Be Taught?" YouTube, The Brainwaves Video Anthology, https://www.youtube.com/watch?v=vlBpDggX3iE.
2. Michael Park et al., "Papers and Patents Are Becoming Less Disruptive Over Time," *Nature* 613 (2023): 138–44.
3. Kyung Hee Kim, "The Creativity Crisis: The Decrease in Creative Thinking Scores on the Torrance Tests of Creative Thinking," *Creativity Research Journal* 23, no. 4 (2011): 285–95.
4. David Eagleman and Anthony Brandt, *The Runaway Species: How Human Creativity Remakes the World* (United Kingdom: Catapult, 2017).
5. Michael Resnick, *Lifelong Kindergarten: Cultivating Creativity through Projects, Passion, Peers, and Play* (Cambridge, MA: MIT Press, 2017).
6. Kyung Hee Kim, "The 2012 Torrance Lecture: The Creativity Crisis," YouTube, UGA Mary Frances Early College of Education, https://www.youtube.com/watch?v=clDZLfwzDok.