

Solutions for Digital Learner-Centered Classrooms

Inspiring Creativity and Innovation in K-12



Douglas Reeves

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Chapter 1

Why Creativity Is Vital

Sir Ken Robinson's writing (2014) and wildly popular YouTube videos (thirty million hits and counting) make clear the importance of creativity for the future of the planet. Creativity is the first priority in talent selection by the Global CEO Study (Lombardo & Roddy, 2010), finishing higher in that survey than integrity and global thinking. Creativity is foundational to human progress, scientific endeavors, and educational success. In the best synthesis of the international evidence, Heather Hammond and colleagues (2013) and John Hattie (2012) find durable positive relationships between creativity and student achievement and conclude that successful nurturing of creativity depends on feedback that is accurate and active.

The fundamental question is this: Why do so many people enthusiastically watch a Ken Robinson video and devour research about creativity and achievement and then do absolutely nothing about what they learned? This book explores the challenges of creativity and offers practical advice for educators, school leaders, and policy-makers. It is not enough to acknowledge that creativity is important; we must first understand why creativity presents such a challenge, particularly in an educational environment.

The quest for creativity presents four central challenges to education professionals and students. First, creativity is risky and

uncomfortable. Second, creativity fails to offer the immediate positive feedback to which generations of students have become accustomed. Few students persist in the face of failure—the inevitable result of creative efforts. Third, the abdication of authority by teachers is worrisome to teachers, students, parents, and administrators. Fourth is the challenge of disciplinary silos. Despite abundant evidence that the development of creativity depends on interdisciplinary efforts, faculty members, particularly at secondary and collegiate levels, find the greatest professional and psychological security within the academic disciplines where their expertise is unchallenged.

Creative Discomfort

Risk, failure, and ambiguity—these are among the essential ingredients of creativity. Yet while there is nearly unanimous praise for the concept of creativity, there is little enthusiasm for the difficult, challenging, and sometimes embarrassing steps required to achieve the goal. Prolific inventor James Dyson (2000) estimates that he experienced more than five thousand failures before developing the eponymous vacuum cleaner that now dominates the industry. Stories of successful ideas go back centuries to the time of Archimedes, who is credited with the original “Eureka!” moment, sitting in his bathtub pondering a challenge from the king. But it’s a good bet that Archimedes took a lot of baths before yelling “Eureka!” as he ran naked through the town, proclaiming his discovery of water displacement by irregularly shaped objects.

Discomfort is not, however, part of most school environments, where students and teachers are encouraged to “get it right the first time.” The common use of the average—the default of most computerized evaluation systems when summarizing a set of scores—means that the risk, experimentation, and discomfort experienced during the first days of school are part of final student and teacher evaluations. Even the Global CEO Study finds that while 60 percent of leaders claim to value creativity as one of the primary attributes

of leaders they hire, more than 70 percent admit that they do a poor job of assessing and encouraging it (Lombardo & Roddy, 2010). In the business world, it's difficult to engage in creative discomfort when your bonus as well as your mortgage payment depend on tomorrow's results.

In education, creative ways of engaging students give way to the exigencies of tomorrow's test. For example, one of the best ways to encourage creativity is with an environment of debate and dissent (Rogers & Simms, 2014). Yet this promising instructional strategy is often doomed by a culture of congeniality in which respecting one's classmates and colleagues is interpreted by some students and teachers as never engaging in open disagreement, dissent, or criticism.

Delayed Feedback

Compare the following profiles of the performance of two students. Each student submitted ten projects, assignments, or other assessments for teacher evaluation. Both students finished the class doing A work, but there the similarity ends.

Student 1: A, A, A, A, A, A, A, B, A, A—Final grade of A

Student 2: F, F, F, A, F, F, F, A, F, A—Final grade?

The first student knows the game of school well. As close to failure and risk taking as the first student comes is to receive a B—a rare occurrence that may lead to challenges for the teacher from both student and parents. The language of the grade doesn't matter—whether the mark is B or “meets expectations”—the perception, at least in many affluent homes, is that a score less than perfection is a dagger in the heart of a student who is accustomed to only receiving the highest marks available.

The second student swings for the fences, alternating between spectacular failure and success. With a rare degree of resilience, the second student willingly persists in the face of failure after failure,

rewarded by the occasional success. Colleges, graduate schools, and employers insist that they value creativity and risk taking, but which student are they more likely to accept or hire? It's tempting to be cynical about grade inflation among students. However, the same issue presents itself when superintendents routinely meet or exceed the expectations of the boards that hired them and, even in an environment of renewed evaluation and accountability, the vast majority of teachers receive high ratings.

Abdication of Authority

Take it from a parent who has a very difficult time reconciling evidence about risk and error with the reality that error, at least in an environment of high expectations and exceptional academic achievement, rarely occurs. When my daughter makes a scientific pronouncement that is clearly preposterous, I wonder, "Why didn't her teachers *teach* her the right way? They are supposed to be the experts!" However, whenever she parrots something she has learned in school with insufficient critical reasoning, I wonder, "Why didn't her teachers let her *explore alternatives and challenge prevailing authority*?" I can't have it both ways, and teachers can't win in an environment in which parents simultaneously demand student creativity and conformity. We are caught in what might be called Gardner's Dilemma, after Harvard psychologist and Project Zero founder Howard Gardner. He makes a clarion call for both creativity and disciplinary excellence. To sum it up, you can't think outside of the box if you don't first *understand the box*.

Gardner's (1993) analysis of the creative processes of Freud, Einstein, Picasso, Stravinsky, Eliot, Graham, and Gandhi suggests that wildly diverse thinkers and artists share some common characteristics. Attributing their work to genius alone undermines the historical facts: they studied their craft, worked incredibly hard, and suffered many failures along the road to their success. If these magnificent thinkers had been evaluated on the average of their work,

then Einstein would have retired in the Swiss patent office, and Stravinsky would have died on the streets of Paris trying to sell the shoes thrown at him during the premiere of *The Rite of Spring*.

Disciplinary Silos

Few secondary school administrators understand calculus as well as the mathematics teacher, fugues as well as the music teacher, literature and composition as well as the English teacher, history as well as the social studies teacher, or chemistry as well as the science teacher. Even with experience in teaching the primary grades, few elementary school administrators understand how to teach the essentials of reading, even though they are among the most important instructional skills required in the early grades. Because administrators cannot be experts in everything, it is reasonable to expect education leaders to be attuned to opportunities for meaningful collaboration among the faculty. For example, feedback strategies of the chorus conductor and athletic coach might inform their colleagues' professional practices in literacy and mathematics. Similarly, secondary school teachers whose students struggle with literacy can learn much from their colleagues who specialize in literacy instruction.

These four challenges—the risk and discomfort inherent in the creative process, students' need for immediate positive feedback, the abdication of authority by educators and leaders, and the persistence of disciplinary silos—militate against what we know to be essential progress toward creativity. These challenges are not met with an instruction manual or an academic study but rather with educators willing to build a creative culture. That is the focus of the next chapter.