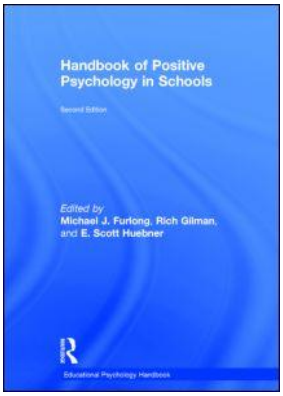
This article was downloaded by: *10.3.98.93*
On: 20 Jan 2019
Access details: *subscription number*
Publisher: *Routledge*
Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: 5 Howick Place, London SW1P 1WG, UK




# Handbook of Positive Psychology in Schools

Patricia A. Alexander, Michael J. Furlong, Rich Gilman, E. Scott Huebner

## Creativity in the Schools

Publication details
https://www.routledgehandbooks.com/doi/10.4324/9780203106525.ch11
James C. Kaufman, Ronald A. Beghetto
**Published online on: 03 Mar 2014**

**How to cite :-** James C. Kaufman, Ronald A. Beghetto. 03 Mar 2014, *Creativity in the Schools from:* Handbook of Positive Psychology in Schools Routledge
Accessed on: 20 Jan 2019
https://www.routledgehandbooks.com/doi/10.4324/9780203106525.ch11

**PLEASE SCROLL DOWN FOR DOCUMENT**

Full terms and conditions of use: https://www.routledgehandbooks.com/legal-notices/terms

This Document PDF may be used for research, teaching and private study purposes. Any substantial or systematic reproductions, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The publisher shall not be liable for an loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Downloaded By: 10.3.98.93 At: 12:42 20 Jan 2019; For: 9780203106525, chapter11, 10.4324/9780203106525.ch11

# 11

# CREATIVITY IN THE SCHOOLS

## Renewed Interest and Promising New Directions

*James C. Kaufman, Department of Educational Psychology, University of Connecticut, Storrs, Connecticut, USA*

*Ronald A. Beghetto, College of Education, University of Oregon, Eugene, Oregon, USA*

The authors acknowledge Heather Roessler for assistance in preparing the manuscript.

## INTRODUCTION

Educators and psychologists have long viewed creativity as an important yet often neglected educational goal (Aljughaiman & Mowrer-Reynolds, 2005; Beghetto & Plucker, 2006; Guilford, 1950; Vygotsky 1967/2004). Interest in making creativity a more central goal in schools has grown steadily in recent years. Indeed, in the years that have transpired since our first version of this chapter, creativity in education has received headline attention in popular media outlets (e.g., *Newsweek*, *Wall Street Journal*), become the focus of widely popular talks given by public intellectuals (e.g., TED talks), and is frequently highlighted in both popular sources of information (e.g., blog posts) and various scholarly outlets (e.g., edited books, scholarly and practitioner-based journals). One reason for this increased interest is that creativity is viewed as a basic competency for being able to navigate the increasingly complex and unpredictable nature of life in a digital age (Craft, 2011). Not surprisingly, then, creativity has been featured as a central skill in the national curricula of various countries around the world (Beghetto, 2010; Craft, 2007). With respect to the United States, interest in the role that creativity can and should play in the K–12 curriculum has also grown steadily (Beghetto & Kaufman,

Downloaded By: 10.3.98.93 At: 12:42 20 Jan 2019; For: 9780203106525, chapter11, 10.4324/9780203106525.ch11

2013), as evidenced in recent national curricular guidelines that view creativity as a key component to development in students. For instance, the *Partnership for 21st Century Skills* (www.P21.org) includes creativity as one of its core learning skills.

Coupled with renewed interest in creativity are new concerns about the potentially stifling effects of schools and classrooms on the development of students' creative potential—leading to the report of "a creativity crisis" in U.S. schools (Bronson & Merryman, 2010; Kim, 2011). Teachers are caught somewhere in the middle. Although most teachers recognize the value of creativity, mandated accountability standards often place pressure on teachers to increase standardized test scores. Thus, concerns are expressed that nurturing creativity will come at the cost of covering the curriculum and even lead the class off topic—drifting toward curricular chaos (see essays in Beghetto & Kaufman, 2010). Unless teachers and researchers have a clear understanding of the nature of creativity and how it can coexist in a context of academic accountability, it is unlikely that renewed interest in creativity will lead to substantive changes in classroom practice.

In this chapter, we begin by discussing standard definitions and concepts of creativity, and we elaborate on our Four C Model of Creativity, which we believe is a more encompassing approach to creativity. We then discuss the conditions necessary for nurturing students' development of creativity, including types of educational environments conducive to nurturing creative development and the importance of teaching students when (and when not) to be creative. We close with a summary of key points from the chapter and highlight a few key resources for anyone interested in learning more about creativity in the schools.

## WHAT IS CREATIVITY?

Until the 1950s, creativity research was minimal, if barely existent. Less than 0.2% of all entries of *Psychological Abstracts* concentrated on creativity (Guilford, 1950). In his seminal address at the 1950 convention of the American Psychological Association, Guilford persuasively argued for the practical application and scientific merits of creativity research (Kaufman, 2009). Since that influential address, creativity has grown to be a key topic of research studied by numerous scholars representing varied disciplines (e.g., psychology, sociology, philosophy, the arts, and education) throughout the world.

One way of conceptualizing how creativity is researched across the world is to focus on *whose* creativity is being studied. By way of example, the focus of study in creativity depends on whether one is studying internationally famous movie director Steven Spielberg, his plumber (who may creatively fix troublesome leaks), his computer-scientist father and musician mother (both accomplished in their own right), his daughter Mikaela, or her fifth-grade teacher. Thus, the best way to measure creativity may shift according to the creator. Regardless of focus, most definitions of creativity now comprise two components. First, creative ideas need to represent something different, new, or innovative. Second, creative ideas must also be appropriate to the task. Thus, a creative response is original and appropriate as defined in a particular context (Kaufman & Sternberg, 2007; Plucker, Beghetto, & Dow, 2004).

Downloaded By: 10.3.98.93 At: 12:42 20 Jan 2019; For: 9780203106525, chapter11, 10.4324/9780203106525.ch11

## THE FOUR C MODEL

### *Big-C Approaches*

Most investigations of creativity tend to take one of two directions. The first direction focuses on works from eminent individuals, particularly those that are time honored. These types of studies and theories are typically referred to as studying "Big-C" creativity. Examples of studies include those that examine the creative contributions of eminent classical and opera composers whose works have lasted centuries (e.g., Simonton, 1977, 1997) or legendary scientists (Simonton, 2009). Much of the Big-C research uses the historiometric method, which analyzes data taken from biographies or reference sources, thus allowing researchers to examine cross-group patterns in a way that would be impossible to do by interviewing each individually. Many creativity theories have focused on Big-C concepts. For example, the Propulsion Theory of Creative Contributions (Sternberg & Kaufman, 2012; Sternberg, Kaufman, & Pretz, 2002) focuses on how an individual's creative act potentially changes an entire field. The authors outline eight different types of creative contributions, with each representing a different way that a creator can impact a field. The first four contributions all stay within the framework of an existing paradigm. The most basic type of contribution is *replication*, which simply reproduces the past work of others. In comparison, *redefinition* tries to present a different perspective to an established concept, comparable to how a director might re-envision a classic play. The third contribution is *forward incrementation,* which pushes forward a field of study just a little. Maybe the creator makes a slight change in what already exists, such as a slight twist on a genre novel. These additions usually are not groundbreaking—it takes the field of study in the same direction it was heading. The final contribution is the *advance forward incrementation*. This contribution pushes the field of study far ahead—and the creator often suffers for being too far ahead of the times. The remaining four creative types discussed in propulsion theory represent attempts to reject and replace the current paradigm. *Redirection* represents an attempt to take a field of study in a new direction. If most of these contribution types represent forward momentum, *reconstruction/redirection* is an attempt to move the field back to where it once was (a reconstruction of the past) so that it may move forward from this point—but in a different direction. Perhaps the most radical of all of the creative contributions is *reinitiation*. In *reinitiation*, the creator tries to move the field to a new (as-yet-unreached) starting point, then progress from there (e.g., Marcel DuChamp entering a urinal in an art exhibit and declaring it art). Finally, the last contribution is *integration*, in which two diverse domains are merged to create a new idea (e.g., the iPhone, which combines a handheld computer and cell phone).

### *Little-c Approaches*

The other predominant approach to creativity focuses on creative activities conducted every day by laypersons or individuals who would not necessarily be considered experts or luminaries (e.g., Richards, 2007). The theories and studies along this line of thinking are usually said to focus on "little-c." Areas of research that focus on little-c creativity may be aimed at developing and warranting the assertion that everyone has creative potential (for reviews, see Kaufman & Baer, 2005; Plucker et al., 2004). Some examples of little-c

Downloaded By: 10.3.98.93 At: 12:42 20 Jan 2019; For: 9780203106525, chapter11, 10.4324/9780203106525.ch11

research include investigations of layperson perceptions of creativity (i.e., how a layperson's concept of creativity may differ from how a researcher might define the construct) and cross-cultural comparisons of beliefs about creativity (Lim & Plucker, 2001; Paletz & Peng, 2008).

There are several creativity theories that seem grounded in little-c, such as the Investment Theory of Creativity (Sternberg & Lubart, 1995), which argues that the key to being creative is to identify ideas or areas of research that have received only minimal attention, research these ideas, and convince others of how important they might be—and then, when other people have begun to study this topic, move on to another "unpopular" area of research. Sternberg and Lubart (1995) list six variables as being essential to creativity: intelligence, knowledge, personality, environment, motivation, and thinking styles. There are, indeed, patterns in these six variables that would describe a creative person. For example, people who are born into environments that value and nurture creativity tend to grow up to be more creative than people who grow up in environments that do not value (and may even punish) creativity. Another theory is Amabile's (1996) Componential Model of Creativity, which contends that three variables are needed for creativity to occur: *domain-relevant skills* (knowledge of a particular field of study; having technical skills or talent within that domain); *creativity-relevant skills* (personal characteristics such as tolerance for ambiguity, ability to consider divergent perspectives, having creative metacognition, being self-disciplined, willingness to take risks); and *task motivation* (e.g., intrinsic or deep interest in the task).

### *Beyond Big-C and little-c*

Although the distinction between Big-C and little-c creativity has been useful for helping to clarify different levels of creative magnitude, important ambiguities remain. There are people who are extremely creative and accomplished, but not at the Big-C level—should they be lumped in with little-c creators? If so, then little-c becomes a very broad category. Further, how are these models applied to K–12 and college-level learning?

The creative interpretations made by students as they learn a new concept or make a new metaphor are given short shrift in most conceptions of creativity. Consider, for example, the earlier-noted and standard definitions of creativity, which emphasize the combination of novelty and usefulness as defined within a particular sociocultural context (e.g., Plucker et al., 2004). Such definitions highlight the important role that the sociocultural context (e.g., eighth-grade poetry club vs. the *Norton Anthology of Poetry*) plays in determining what will be considered novel and useful. These core components of creativity (i.e., novelty, usefulness, social context) seem most salient to the little-c model. For instance, if an amateur poet shared some poems with a friend, he or she would not expect that friend to begin a critique by comparing the poems to Robert Frost or T.S. Eliot. Indeed, to reach the level of publishable work usually takes approximately 10 years (Hayes, 1989). The friend would likely evaluate the poems by determining whether there was something new and original about them and making sure that the poems followed some basic conventions of poetry. At the Big-C level, on the other hand, the twin components of novelty and usefulness are automatically assumed to be present. An analyst who studies the poetry of Emily Dickenson or W.B. Yeats does not need to begin by asserting

Downloaded By: 10.3.98.93 At: 12:42 20 Jan 2019; For: 9780203106525, chapter11, 10.4324/9780203106525.ch11

that the poems are new or useful. Rather, the larger question rests on how these poets impacted the field and influenced generations of young writers.

Where does this leave the creative insights had by students who are still learning how to write poetry? A student's initial efforts at poetry will not likely be judged to be novel or useful. As such, standard (little-c) definitions of creativity are not applicable (because the standard definition relies on external judgments of novelty and usefulness). Importantly, however, the student's early poems can still represent work that is personally new and meaningful to *him or her*. Even though the poem likely will not represent anything new to the field, the very process of learning a field (like writing poetry) presents many opportunities for students to experience creative insights and interpretation.

Big-C and little-c conceptions of creativity are not enough to capture the complex nature of creativity. Kaufman and Beghetto (2009, 2013; Beghetto & Kaufman, 2007), therefore, proposed a Four C Model of Creativity that included two additional categories over what has been proposed in existing models: "Pro-c" and "mini-c." Pro-c creativity is expert-level creativity that has not yet attained legendary status: If Jascha Heifitz is a Big-C violinist, then a Pro-c violinist might be the first chair of the Los Angeles Philharmonic. Mini-c creativity constitutes the lowest level of the hierarchy—self-discovering or gleaning personally meaningful insights and interpretations inherent in the learning process (Beghetto & Kaufman, 2007). As one example that distinguishes the little-c from the mini-c, someone who plays violin for a community orchestra would be at the little-c category, while a sixth-grade starting violin lessons would be at the mini-c category.

Given that mini-c is most applicable to school-aged youth, we focus on that concept here. Mini-c creativity broadens traditional conceptions of creativity to include creative insights and interpretations. Occasionally, such insights and interpretations may develop into little-c (or perhaps even Big-C) contributions (Beghetto & Kaufman, 2007). In this way, mini-c creativity can also serve as natural progression to more mature and impactful forms of creativity (little-c and Big-C). For example, the invention of Velcro (Big-C creativity) started with George de Mestral's mini-c insight he had after examining the burs that latched onto his clothing while hiking in the Swiss Alps. Of course, the ability to move from such a mini-c insight into the manufacturing of a Big-C product (like Velcro) requires expert knowledge, persistence, resources, and some degree of luck (see Simonton, 2009). Still, it is important to note that the unambiguous, creative end product (in this case, Velcro) can overshadow the recognition that the process started with a mini-c (intrapersonal) insight. Although not everyone's insights will lead to innovative and high-impact products, the genesis of such products (i.e., mini-c insights) occurs nearly every day and is available to most anyone (be they world-renowned inventors or grade school children).

### *The Promise of mini-c Creativity for Schools and Classrooms*

We see the concept of mini-c creativity as holding great promise for helping educators make room for creativity in schools and classrooms. Traditional conceptions of creativity, which focus on eminent levels of creative breakthrough and high levels of productivity, make it difficult for educators to justify spending time on activities with such a low probability of manifesting "creativity" in their students (i.e., revolutionary breakthroughs and

Downloaded By: 10.3.98.93 At: 12:42 20 Jan 2019; For: 9780203106525, chapter11, 10.4324/9780203106525.ch11

high levels of productivity in some domain). It is, therefore, not surprising that while teachers generally value creativity, they fail to see its relevance or importance in their own classroom (Beghetto, 2007; Beghetto & Plucker, 2006).

The marginalization of creativity in schools and classrooms is also underwritten by a host of negative stereotypes and perceptions about creative students. These negative beliefs and perceptions are found across cultures and have long histories. For example, some teachers in Western cultures seem to value creative students less than they value bright students, in part because they associate creativity with nonconformity, impulsivity, and disruptive behavior (e.g., Dawson, 1997; Scott, 1999). Other studies find that teachers feel favorably about creative students (e.g., Runco, Johnson, & Baer, 1993), although they may not be fully clear on what creativity means (Aljughaiman & Mowrer-Reynolds, 2005). For example, in one study, teachers reported liking creative students but then defined creativity with adjectives such as "well-behaved" or "conforming." These perceptions changed for the negative when the same teachers were given descriptors that were more typically used to describe creative people, such as "impulsive" or "tries to do what others call impossible" (Westby & Dawson, 1995).

Several other investigations have found that teachers' understanding of creativity is often poor. Diakidoy and Phtiaka (2002), for example, discovered that teachers associated creativity primarily with the arts and did not associate "knowledge" as a meaningful component of creativity (see also Seo, Lee, & Kim, 2005). Further, de Souza Fleith (2000) found that although teachers articulated how their attitudes might impact student creativity, they did not consider concepts such as self-evaluation, rewards, or intrinsic motivation as being related to creativity. These negative or misinformed perceptions of creativity can transcend cultures. For example, Tan (2003) reported that student teachers in Singapore favored students who had pleasant dispositions (e.g., kind, friendly) over students who were more creative and risk taking. Chan and Chan (1999) found that Chinese teachers associated socially undesirable traits with student creativity, arguing that in Chinese cultures, nonconforming or expressive behavior can be interpreted as arrogant or rebellious. Similar findings have been found in Turkish teachers (Güncer & Oral, 1993).

Mini-c creativity offers teachers another way of thinking about student creativity. Indeed, mini-c creativity highlights the creative processes inherent in the development of creative potential. The concept of mini-c helps teachers recognize that creativity most likely manifested in their classroom will be of a different caliber and require more nurturance than what traditional conceptions of creativity would allow. Importantly, mini-c creativity reframes creativity in a more positive light for teachers. Rather than creativity being viewed as something extraordinary (and therefore extracurricular), mini-c stresses that creative insights and interpretations are present in students' everyday learning of core curricular topics. When teachers recognize this, it is hoped that they will be in a better position to provide supportive feedback aimed at helping students develop their creative potential.

Supportive teacher feedback is an important issue when it comes to students' creativity development. For instance, Beghetto (2006) found that middle and secondary students' reports of teachers providing positive feedback on their creativity were the strongest predictors of beliefs in their own creativity. As such, teachers have good reason

Downloaded By: 10.3.98.93 At: 12:42 20 Jan 2019; For: 9780203106525, chapter11, 10.4324/9780203106525.ch11

to actively seek out (and develop) strategies for providing supportive feedback that helps students develop their confidence in their own creativity. Doing so may help students move from mini-c interpretations to real-world innovations.

How might this feedback look in the classroom? Beghetto (2007) discussed how teachers can encourage movement from mini-c interpretations to little-c expressions by: (a) taking the time to hear and attempt to understand how students are interpreting what they are learning; (b) helping students recognize when their contributions are not making sense given the domain constraints, conventions, and standards of a particular activity or task; and (c) providing multiple opportunities for students to practice developing the skills of a particular domain or task. These suggestions, as well as other practical recommendations (see Beghetto, 2005), provide tangible illustrations of how teachers can recognize the value of students' mini-c creativity.

## ENVIRONMENTS SUPPORTIVE OF CREATIVE EXPRESSION

The policies, practices, and procedures of schools and classrooms are laden with goal-related messages that influence the motivational beliefs and subsequent achievement behavior of students (Pintrich & Schunk 2002). Everything from grading practices to honor rolls to displaying student work in hallways and classrooms communicates what is valued in the school/classroom and provides an underlying rationale for engaging in (or avoiding) achievement-directed behaviors. For instance, if displays of student writing in classrooms are finalized products (as opposed to drafts leading to finalized products), then the importance of outperforming others or avoiding the appearance of incompetence may be (unintentionally) stressed.

Motivation researchers have categorized the messages emphasized by learning environments into two major types: *mastery goal structures* and *performance goal structures* (see Anderman and Anderman, this book). Mastery goal structures have been linked to intrinsic motivation, whereas performance goal structures can trigger extrinsic motivation (Pintrich & Schunk 2002). Many research studies (Amabile, 1996; Amabile, Hennessey, & Grossman, 1986; Amabile, Hill, Hennessey, & Tighe, 1994) report that creativity is typically increased when students have intrinsic motivation about a task. However, the relation between motivation, goal structure, and creativity is not necessarily completely straightforward. Although limited empirical work has directly examined the influence of classroom goal structures on student creativity, the conceptual links between creativity, classroom goal structures, and students' motivational beliefs likely are complex, nuanced, and extend beyond the good/bad dichotomy in which mastery and performance goals are often portrayed. For example, Beghetto (2006) found a positive association between middle and secondary students' creative self-efficacy beliefs (i.e., self-assessments of creativity) and mastery goal orientations (i.e., focus on improvement). Interestingly, a positive relation was also found between students' creativity self-efficacy beliefs and their performance approach beliefs. This finding suggests that there may be an optimal "additive pattern" (Barron & Harackiewicz, 2001) of mastery and performance approach beliefs and creative self-efficacy beliefs. In other words, it may be the case that the combination of mastery *and* performance goals actually bolsters and protects creativity self-beliefs.

Downloaded By: 10.3.98.93 At: 12:42 20 Jan 2019; For: 9780203106525, chapter11, 10.4324/9780203106525.ch11

At this point, such assertions require further study and, importantly, should not underplay the potentially negative impact that external rewards may have on creativity (particularly in the absence of mastery goals that may counterbalance their negative effects). Indeed, the very presence of rewards for creative work can impact creativity and the desire to be creative in multiple ways. In one study, even with tasks presented in a context that emphasized intrinsic motivation, extrinsic rewards had a negative impact on performance (Cooper, Clasen, Silva-Jalonen, & Butler, 1999). Others argue that rewards can be beneficial if given wisely. For example, neither an individual's intrinsic motivation nor creativity were negatively affected—and could actually be enhanced—if the reward (particularly a verbal reward) was delivered after the creative activity (Eisenberger & Selbst, 1994). Eisenberger and Shanock (2003), in reviewing the many studies on the harm or benefits of reward, concluded that much of the debate involves methodological issues. Specifically, they argued that rewarding creative performance increases both intrinsic motivation and creativity (traditionally measured at the mini-c or little-c level), whereas rewarding conventional performance decreases both intrinsic motivation and creativity.

Given the strong connection among the school environment, motivation, and creativity, educators have a responsibility to actively consider how the motivational messages sent by school and classroom policies, practices, and procedures may influence students' willingness to develop and express their creativity. Beghetto (2005) provides several general recommendations for supporting student creativity in educational settings. Those recommendations include: (a) setting challenging but realistic goals for students and focusing on the features of a task that are interesting and personally meaningful (rather than attempting to motivate students to complete tasks simply because they are assigned and will be graded); (b) supporting creative expression by encouraging the generation of novel ideas and helping students then select the most promising and appropriate ideas for a given task; (c) minimizing the pressures of assessment; (d) helping students recognize that the primary reason for engaging in a task is self-improvement rather than just showing others that they can successfully complete a task; (e) helping students learn from mistakes and recognize that making mistakes is a natural part of learning; and (f) helping students consider what their assigned grade meant rather than focusing solely on letter grades and test scores (i.e., what they did well and how they might improve in the future).

## TEACHING STUDENTS WHEN (AND WHEN NOT) TO BE CREATIVE

Given the recent attention paid to creativity and the interest on the part of policy makers and business leaders to make creativity a more prominent educational goal in the United States and abroad (Craft, 2007; www.P21.org), the message that may be sent to teachers and students is that they should somehow strive to be creative at all times and in all places. We worry that this is the wrong message.

Part of developing a creative skillset includes learning when (and when not) to be creative. This knowledge, called creative metacognition (Kaufman & Beghetto, 2013), refers to a combination of creative self-knowledge (knowing one's own creative strengths and limitations, both within a domain and as a general trait) and contextual knowledge

Downloaded By: 10.3.98.93 At: 12:42 20 Jan 2019; For: 9780203106525, chapter11, 10.4324/9780203106525.ch11

(knowing when, where, how, and why to be creative). Prior research has provided evidence that creative people have higher creative metacognition (CMC). For example, Silvia (2008) asked people to pick their best responses to a divergent-thinking task and found that more creative people were more likely to choose accurately. Similarly, Runco and his colleagues (Runco & Dow, 2004; Runco & Smith, 1992) found that people who tend to produce more original responses are also better at rating their most original responses to a divergent thinking task. Such insight could also be used to determine times when creativity might be best reined in. For example, a student may have a very creative idea about butterflies during a multiplication test, but the best course of action is probably to finish the test first.

A key area of future research is thus to explore how teachers might best encourage students to be creative and, at the same time, teach students how to "read a situation" and determine whether and how to express one's creative ideas, insights, and behaviors. One place to start would be in how teachers provide students with informative feedback—highlighting students' creative strengths (what they can already do well) and limitations (where they need to continue to learn and improve). For example, researchers might explore how use of the Goldilocks Principle of feedback (Beghetto & Kaufman, 2007) supports the development of CMC. Specifically, this principle highlights the importance of providing feedback that is not too harsh (stifling students' motivation) yet not too gentle (little attention to real-world standards).

## REFERENCES


Aljughaiman, A., & Mowrer-Reynolds, E. (2005). Teachers' conceptions of creativity and creative students. *Journal of Creative Behavior, 39,* 17–34. doi:10.1002/j.2162-6057.2005.tb01247.x

Amabile, T.M. (1996). *Creativity in context: Update to the social psychology of creativity.* Boulder, CO: Westview.

Amabile, T.M., Hennessey, B.A., & Grossman, B.S. (1986). Social influences on creativity: The effects of contracted-for reward. *Journal of Personality and Social Psychology, 50*, 14–23. doi:10.1037/0022-3514.50.1.14

Amabile, T.M., Hill, K.G., Hennessey, B.A., & Tighe, E.M. (1994). The work preference inventory: Assessing intrinsic and extrinsic motivational orientations. *Journal of Personality and Social Psychology, 66*, 950–967. doi:10.1037/0022-3514.66.5.950

Barron, K.E., & Harackiewicz, J.M. (2001). Achievement goals and optimal motivation: Testing multiple goal models. *Journal of Personality and Social Psychology, 80,* 706–722. doi:10.1037/0022-3514.80.5.706

Beghetto, R.A. (2005). Does assessment kill student creativity? *Educational Forum, 69,* 254–263. doi:10.1080/00131720508984694

Beghetto, R.A. (2006). Creative self-efficacy: Correlates in middle and secondary students. *Creativity Research Journal, 18,* 447–457. doi:10.1207/s15326934crj1804_4

Beghetto, R.A. (2007). Ideational code-switching: Walking the talk about supporting student creativity in the classroom. *Roeper Review, 29,* 265–270. doi:10.1080/02783190709554421

Beghetto, R.A. (2010). Creativity in the classroom. In J.C. Kaufman & R.J. Sternberg (Eds.), *Handbook of creativity* (pp. 447–466). New York, NY: Cambridge University Press.

Beghetto, R.A., & Kaufman, J.C. (2007). Toward a broader conception of creativity: A case for "mini-c" creativity. *Psychology of Aesthetics, Creativity, and the Arts, 1*, 13–79. doi:10.1037/1931-3896.1.2.73

Beghetto, R.A., & Kaufman, J.C. (Eds.). (2010). *Nurturing creativity in the classroom*. New York, NY: Cambridge University Press.

Beghetto, R.A., & Kaufman, J.C. (2013). Fundamentals of creativity. *Educational Leadership, 70,* 10–15.

Beghetto, R.A., & Plucker, J.A. (2006). The relationship among schooling, learning, and creativity: "All roads lead to creativity" or "You can't get there from here?" In J.C. Kaufman & J. Baer (Eds.), *Creativity and reason in cognitive development* (pp. 316–332). Cambridge, UK: Cambridge University Press. doi:10.1017/CB09780511606915.019

Downloaded By: 10.3.98.93 At: 12:42 20 Jan 2019; For: 9780203106525, chapter11, 10.4324/9780203106525.ch11

Bronson, P.O., & Merryman, A. (2010, July 19). The creativity crisis. *Newsweek*, 44–50.

Chan, D.W., & Chan, L.K. (1999). Implicit theories of creativity: Teachers' perception of student characteristics in Hong Kong. *Creativity Research Journal, 12,* 185–195. doi:10.1207/s15326934crj1203_3

Cooper, B.L., Clasen, P., Silva-Jalonen, D.E., & Butler, M.C. (1999). Creative performance on an in-basket exercise: Effects of inoculation against extrinsic reward. *Journal of Managerial Psychology, 14*, 39–56. doi:10.1108/02683949910254747

Craft, A. (2007). Possibility thinking in the early years and primary classroom. In A.G. Tan (Ed.), *Creativity: A handbook for teachers* (pp. 231–249.) Singapore: World Scientific.

Craft, A. (2011). *Creativity and education futures: Learning in a digital age.* Staffordshire, UK: Trentham Books.

Dawson, V.L. (1997). In search of the wild bohemian: Challenges in the identification of the creatively gifted. *Roeper Review, 19,* 148–152. doi:10.1080/02783199709553811

de Souza Fleith, D. (2000). Teacher and student perceptions of creativity in the classroom environment. *Roeper Review, 22*, 148–153. doi:10.1080/02783190009554022

Diakidoy, I.N., & Phtiaka, H. (2002). Teachers' beliefs about creativity. In S.P. Shohov (Ed.), *Advances in psychology research* (Vol. 15, pp. 173–188). Hauppauge, NY: Nova Science.

Eisenberger, R., & Selbst, M. (1994). Does reward increase or decrease creativity? *Journal of Personality and Social Psychology, 66*, 1116–1127. doi:10.1037/0022-3514.66.6.1116

Eisenberger, R., & Shanock, L. (2003). Rewards, intrinsic motivation, and creativity: A case study of conceptual and methodological isolation. *Creativity Research Journal, 15,* 121–130. doi:10.1207/S15326934CRJ152&3_02

Guilford, J.P. (1950). Creativity. *American Psychologist, 5*, 444–454. doi:10.1037/h0063487

Güncer, B., & Oral, G. (1993). Relationship between creativity and nonconformity to school discipline as perceived by teachers of Turkish elementary school children, by controlling for their grade and sex. *Journal of Instructional Psychology, 20*, 208–214.

Hayes, J.R. (1989). *The complete problem solver* (2nd ed.). Mahwah, NJ: Erlbaum.

Kaufman, J.C. (2009). *Creativity 101*. New York, NY: Springer.

Kaufman, J.C., & Baer, J. (Eds.). (2005). *Creativity across domains: Faces of the muse.* Mahwah, NJ: Erlbaum.

Kaufman, J.C., & Beghetto, R.A. (2009). Beyond big and little: The Four C Model of Creativity. *Review of General Psychology, 13,* 1–12. doi:10.1037/a0013688

Kaufman, J.C., & Beghetto, R.A. (2013). In praise of Clark Kent: Creative metacognition and the importance of teaching kids when (not) to be creative. *Roeper Review, 35,* 155–165.

Kaufman, J.C., & Sternberg, R.J. (2007). Resource review: Creativity. *Change*, *39*, 55–58.

Kim, K.H. (2011). The creativity crisis: The decrease in creative thinking scores on the Torrance Tests of Creative Thinking. *Creativity Research Journal, 23,* 285–295. doi:10.1080/10400419.2011.627805

Lim, W., & Plucker, J. (2001). Creativity through a lens of social responsibility: Implicit theories of creativity with Korean samples. *Journal of Creative Behavior, 35*, 115–130. doi:10.1002/j.2162-6057.2001.tb01225.x

Paletz, S., & Peng, K. (2008). Implicit theories of creativity across cultures: Novelty and appropriateness in two product domains. *Journal of Cross-Cultural Psychology, 39,* 286–302. doi:10.1177/0022022108315112

Pintrich, P.R., & Schunk, D.H. (2002). *Motivation in education: Theory, research, and applications* (2nd ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.

Plucker, J.A., Beghetto, R.A., & Dow, G.T. (2004). Why isn't creativity more important to educational psychologists? *Educational Psychologist, 39,* 83–96. doi:10.1207/s15326985ep3902_1

Richards, R. (Ed.). (2007). *Everyday creativity and new views of human nature: Psychological, social, and spiritual perspectives*. Washington, DC: American Psychological Association Press. doi:10.1037/11595-000

Runco, M.A., & Dow, G.T. (2004). Assessing the accuracy of judgments of originality on three divergent thinking tests. *Korean Journal of Thinking & Problem Solving, 14,* 5–14.

Runco, M.A., Johnson, D.J., & Bear, P.K. (1993). Parents' and teachers' implicit theories of children's creativity. *Child Study Journal, 23,* 91–113.

Runco, M.A., & Smith, W.R. (1992). Interpersonal and intrapersonal evaluations of creative ideas. *Personality and Individual Differences, 13,* 295–302.

Scott, C.L. (1999). Teachers' biases toward creative children. *Creativity Research Journal, 12,* 321–337. doi:10.1207/s15326934crj1204_10

Seo, H., Lee, E., & Kim, K. (2005). Korean science teachers' understanding of creativity in gifted education. *Journal of Advanced Academics, 16*, 98–105.

Silvia, P.J. (2008). Discernment and creativity: How well can people identify their most creative ideas? *Psychology of Aesthetics, Creativity, and the Arts, 2,* 139–146. doi:10.1037/1931-3896.2.3.139

Downloaded By: 10.3.98.93 At: 12:42 20 Jan 2019; For: 9780203106525, chapter11, 10.4324/9780203106525.ch11

Simonton, D.K. (1977). Creative productivity, age, and stress: A biographical time-series analysis of 10 classical composers. *Journal of Personality and Social Psychology*, *35*, 791–804. doi:10.1037/0022-3514.35.11.791

Simonton, D.K. (1997). Creative productivity: A predictive and explanatory model of career trajectories and landmarks. *Psychological Review*, *104*, 66–89. doi:10.1037/0033-295X.104.1.66

Simonton, D. K. (2009). *Genius 101*. New York, NY: Springer.

Sternberg, R.J., & Kaufman, J.C. (2012). When your race is almost run, but you feel you're not yet done: Application of the Propulsion Theory of Creative Contributions to late-career challenges. *Journal of Creative Behavior, 46*, 66–76. doi:10.1002/jocb.005

Sternberg, R.J., Kaufman, J.C., & Pretz, J.E. (2002). *The creativity conundrum*. Philadelphia. PA: Psychology Press.

Sternberg, R.J., & Lubart, T.I. (1995). *Defying the crowd: Cultivating creativity in a culture of conformity*. New York, NY: Free Press.

Tan, A.G. (2003). Student teachers' perceptions of teacher behaviors for fostering creativity: A perspective on the academically low achievers. *Korean Journal of Thinking and Problem Solving, 13*, 59–71.

Vygotsky, L.S. (2004). Imagination and creativity in childhood. (M.E. Sharpe, Inc., Trans.) *Journal of Russian and East European Psychology, 42,* 7–97. (Original work published 1967)

Westby, E.L., & Dawson, V.L. (1995). Creativity: Asset or burden in the classroom? *Creativity Research Journal, 8,* 1–10. doi:10.1207/s15326934crj0801_1

## CHAPTER SUMMARY: CREATIVITY

- Creativity is originality plus task appropriateness.
- There are different types of creative impact.
- There are different levels of creativity.
- Features of the classroom can support creative expression.
- Features of the classroom can suppress creative expression.
- There is a time and place for creativity.

## SUGGESTED READINGS: CREATIVITY

Beghetto, R.A. (2010). Creativity in the classroom. In J.C. Kaufman & R.J. Sternberg (Eds.), *The Cambridge handbook of creativity* (pp. 447–466). Cambridge, UK: Cambridge University Press.

This chapter, in the *Cambridge Handbook of Creativity*, goes into depth about creativity in the classroom.

Beghetto, R.A., & Kaufman, J.C. (2007). Toward a broader conception of creativity: A case for mini-c creativity. *Psychology of Aesthetics, Creativity, and the Arts, 1*, 73–79. doi:10.1037/1931-3896.1.2.73

In this paper, the authors first propose the construct of mini-c.

Kaufman, J.C. (2009). *Creativity 101*. New York, NY: Springer.

This brief book is an overview of the field of creativity studies.

Kaufman, J.C., & Beghetto, R.A. (2009). Beyond big and little: The Four C Model of Creativity. *Review of General Psychology, 13*, 1–12. doi:10.1037/a0013688

In this paper, the authors present the full Four C Model.