

Broadening Conceptions of Creativity in the Classroom

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Over the past decade, we have watched with growing concern as creativity has been squeezed out of many educational arenas. Whether it is the increasingly narrow educational outcomes that policy makers and educational leaders emphasize in their curricular policies and school improvement plans (such as marshaling scarce resources to nudge reading and math scores a fraction of a point higher) or the belief, held by some educators, that the unexpected nature of creativity is nothing more than a distracting tangent, something to be explored “later,” or even a behavior problem – creativity seems to belong on the endangered species list (next to the mantled howler monkey).

The severity of this situation is even more pronounced for high-poverty and traditionally “underperforming” schools that have turned to scripted, “teacher-proof” curricula (Sawyer, 2004) in hopes of boosting performance on standardized learning assessments. It is doubtful that without opportunities to also develop creative and divergent thought that such hollow standardization efforts will boost anything – except, perhaps, longstanding educational inequalities experienced by students who attend these “standardized” schools (McNeal, 2000).

For once, however, we are addressing people who are committed to creativity in the classroom – not those who consistently find ways to resist it (as we realize they likely would only pick up this book to put it back in the mailbox of the person who misplaced it). We are writing to the reader who has bought, borrowed, or stolen this book because they are interested in the topic. We are speaking to you, frankly, because you share both our passion and our concern. We are writing to the teacher who wants to inspire his or her students’ creative potential, the graduate student interested in researching how to promote creativity in the classroom, and anyone who is nodding along right now. We want to briefly share some of our ideas about how together we might aspire to help, nurture, and develop creativity in all students.

Many educators, even those who are committed to creativity, still often wonder: Is it really possible to infuse creativity in an already overpacked

curriculum – yet still adhere to the curricular standards and constraints? In this chapter we hope to address this question by discussing how a broader conception of creativity can support educators in nurturing student creativity and, at the same time, allow them to fulfill curricular requirements.

DO CURRICULAR CONSTRAINTS SUPPRESS TEACHERS' ABILITY TO SUPPORT CREATIVITY?

Teachers commonly find themselves caught between contradictory demands of externally imposed mandates and supporting the needs of their students (Ingersoll, 2003). In a time of heightened school accountability (largely propelled by the No Child Left Behind Act of 2001), teachers may feel that they cannot nurture student creativity within the constraints of the required curriculum – particularly when they feel increased pressure to cover standardized curricula and prepare students for standardized learning assessments.

Indeed, as Aljughaiman and Mowrer-Reynolds have reported (2005), many teachers feel “overwhelmed” with curricular pressures and, consequently, nurturing creativity takes a backseat to more convergent, skill-and-drill approaches to the teaching the curriculum. Even prospective teachers seem to feel this pressure. For instance, Beghetto (2007a) found that prospective middle and secondary teachers generally preferred more expected (and less unique) student responses during class discussions. This preference was frequently underwritten by a concern that unexpected student responses, while potentially promising, would take class discussions “off-task.”

When creativity is viewed as an “add-on” to the curriculum or expression of unconstrained originality, it makes sense that teachers might feel ambivalent about supporting creativity in their classroom. This may help explain why so many teachers, from around the globe, have been found to hold negative views about creative students. For instance, researchers (e.g., Cropley, 1992; Dawson, 1997; Scott, 1999) have found that teachers sometimes prefer less creative students in their classroom, in part because they associate creativity with nonconformity, impulsivity, and disruptive behavior. Similar findings have been reported by researchers outside of the United States. Tan (2003) found that prospective teachers in Singapore favored students who had pleasant dispositions (e.g., kind, friendly, etc.) over students who they viewed as more creative and risk-taking. Chan and Chan (1999) found that Chinese teachers associated socially undesirable traits with student creativity – explaining that in Chinese culture, nonconforming or expressive behavior can be interpreted as arrogant or rebellious. Güncer and Oral (1993) reported similar beliefs held by Turkish teachers.

Not all studies have found that teachers hold negative views about creative students (e.g., Runco, Johnson, & Bear, 1993). However, subsequent studies have indicated that teachers who hold more favorable views about creativity

are not fully clear on what creativity actually means. For example, in one study (Westby & Dawson, 1995), teachers reported that they enjoyed working with creative students, yet when given adjectives that are typically used to describe creative people, they rated students who possessed those adjectives as their least favorite type of student (see also Aljughaiman & Mowrer-Reynolds, 2005). In another study, teachers and parents in America and India reported favorable views of creativity but also linked several words associated with mental illness (emotional, impulsive) with creativity (Runco & Johnson, 2002).

When teachers develop negative or conflicted views about creativity, it can result in missed opportunities for teachers to develop students' creative potential and even result in the systematic suppression of students' creative expression in the classroom (Beghetto, 2009a). This need not be the case. Teachers who successfully support creativity in their classroom recognize the complementary (and necessary) relationship between creativity and curricular constraints. This recognition is underwritten by an understanding that in order for an idea, a product, or a behavior to be considered creative it must combine originality *and* appropriateness (see Plucker, Beghetto & Dow, 2004, for a review). A few hypothetical (yet representative) examples might help clarify.

Tessa teaches mathematics, and she assigns her students a series of algebraic equations. She looks for originality in how a student chooses different strategies to get to the solution, but she also considers appropriateness (do the strategies reach the correct solutions?). Markus is a poetry teacher, and he asks his class to write Haikus. His goals for originality revolve around the students' use of language, word choice, imagery, and metaphor – but he also expects students to be appropriate and follow the specific rules for writing a Haiku. A student who hands in a free verse poem would not be considered creative in this instance (because the poem does not meet the conventions of Haiku or task constraints of the assignment). Laura is a creative shop teacher who asks her students to construct wooden birdhouses. She expects originality in their designs and decorations (students use a variety of unique architectural designs and decorate them with a variety of novel materials, including shells and beads), but the appropriateness (can a bird roost there?) is key.

When teachers recognize that creativity is not simply unconstrained originality – but actually requires a combination of originality and task appropriateness – they can see the value of curricular standards and conventions. Indeed, curricular constraints provide necessary evaluative criteria for judging whether student's original ideas, novel products, and unique accomplishments are appropriate (and therefore creative) within the constraints of particular curricular task, activity, or assignment.

Teachers who have a clear understanding of the nature of creativity – particularly with respect to the necessary combination of originality and task appropriateness – are able to avoid negative stereotypes and myths about creativity and, thereby, make room in for creativity in their curriculum

(Beghetto & Plucker, 2006). Even with this understanding it is sometimes still difficult to image how creativity might be supported as part of everyday curriculum.

WHAT ROLE CAN CREATIVITY PLAY IN THE DAY-TO-DAY CURRICULUM?

When most people think of creative individuals, two types of images generally come to mind. The first image includes legendary pathfinders who have produced amazingly novel accomplishments (e.g., the jazz of John Coltrane, the poems of Emily Dickenson, the scientific brilliance of J. Robert Oppenheimer, or the social justice of Martin Luther King, Jr.). The other type of image is that of the more everyday creative person (e.g., the teacher down the hall who always has the most unique classroom decorations and bulletin boards, the front office secretary who makes original woven baskets, or the facilities crew member who consistently comes up with novel solutions to broken classroom equipment).

These two types of images are often described as Big-C (legendary) and little-c (everyday) creativity. This Big-C/little-c dichotomy, on first blush, seems to offer broad enough categories for classifying creativity. However, as with most dichotomies, these categories are too restrictive – particularly in the context of the classroom. Consider, for instance, a junior high student who has several unique and personally meaningful insights about how she might arrange graphics and text for her school's yearbook. If the little-c category is the only alternative to Big-C, this student's creative insights might be overlooked or unfairly compared to those of a college student enrolled in a graphic arts degree program or even a professional graphic artist who is giving a guest lecture on graphic design at a local university. Or consider the veteran teacher who has been consistently creative in her approach to teaching – it would be somewhat insulting to equate this teacher's creativity with a student-teacher who has developed one or two creative ideas about how he would like to teach a lesson. It seems equally unhelpful to compare her teaching with the transformative pedagogical approaches pioneered by Maria Montessori. If there is no middle ground between Big-C and little-c creativity, then where does this teacher's creativity fit? Neither category seems appropriate.

In an effort to address the limitations of the Big-C/little-c dichotomy, we recently proposed the Four-c Model of Creativity (Kaufman & Beghetto, 2009), which includes interpretive (mini-c) creativity (Beghetto & Kaufman, 2007) and professional (pro-c) creativity. We believe that this model better clarifies different levels of creative expression and can help teachers consider how different levels of creativity may (or may not) be appropriate for their classroom and curriculum. In the following we briefly discuss each category from smallest to largest and highlight classroom implications for each level of creativity.

INTERPRETIVE (MINI-C) CREATIVITY

Although the Big-C and little-c categories offer some level of distinction in creative expression, both conceptions tend to focus on clear-cut creative products and accomplishments – the difference pertains to level of contribution (legendary versus everyday). With respect to creativity in the classroom, this product-oriented focus is problematic for at least two reasons. First, as Runco (2005) has pointed out, the “extremely product-orientated” conceptualizations of creativity can result in educators failing to recognize the creative potential and personal creative efforts of individuals who have not yet “impressed some qualified audience” (p. 616). Even when compared among peers, the creative insights of students who currently lack the experience or knowledge necessary to fully express their ideas may be overlooked in favor of the few students who can more effectively communicate their ideas. Although producing products and persuasively communicating one’s ideas are important aspects of creativity (Sternberg & Lubart, 1996), judging creative potential by the products students’ produce confuses potential with accomplishment.

Second, product-only conceptualizations of creativity minimize the more dynamic and developmental nature of creativity (Cohen, 1989) – placing too great an emphasis on the more static or “fossilized” outcomes of creativity (Moran & John-Steiner, 2003). Consequently, teachers may fail to recognize that students’ unique insights and interpretations might be developed into larger-c creative products and accomplishments. This failure to recognize creative potential is why some creativity researchers have worked to broaden traditional descriptions of creativity to include more “personal” (Runco, 1996), “universal” (Cohen, 1989), and “developmental” (Moran & John-Steiner, 2003) conceptions of creativity – what we have called mini-c creativity (Beghetto & Kaufman, 2007).

Mini-c creativity focuses on the *novel and personally meaningful interpretation of experiences, actions, and events* (Beghetto & Kaufman, 2007) that often occur during the process of learning (e.g., a student having a new and personally meaningful insight about how to incorporate design principles she learned in art class in her PowerPoint presentation on the Civil War). Our conception of mini-c creativity is informed by a Vygotskian (or sociocultural) view of knowledge that stresses the transactional relationship between the individual and social world. This sociocultural emphasis underscores how internal (mini-c) insights and interpretations are influenced by interactions and experiences with domain-relevant knowledge and how, under the right conditions, those internal (mini-c) insights can potentially develop into external (larger-C) contributions.

A real-life example (as reported by Lofing, 2009) may help illustrate this process. Navel orangeworms are a major pest of almond and pistachio growers. Growers commonly use bait made with almonds to attempt to control this

pest. However, Gabriel Leal, a sixth-grade student and son of an entomology professor at University of California at Davis, had the mini-c insight that orangeworms might actually prefer pistachios over almonds. This insight was based on his own experiences (pistachios tasted better to him) and interpretation of the problem (if he preferred the taste of pistachios, then perhaps the orangeworms would also prefer pistachios). Although Gabriel's mini-c insight ran counter to prior research (and the practice of growers), he was supported in testing this idea in a controlled experiment, using his dad's University of California at Davis lab, under the supervision of one of his father's colleagues. The results of the experiment shocked researchers and confirmed Gabriel's mini-c insight. The findings have subsequently been reported at a professional conference by his father, thereby influencing the work of researchers and impacting professional knowledge and practice.

The above example illustrates how mini-c creativity can, under the right conditions, lead to larger-c contributions. Of course, most students do not have access to the kinds of supports, domain-relevant knowledge, and resources to take their mini-c ideas directly to real-world contributions (as Gabriel, the sixth-grader, did). Still, with respect to creativity in the classroom, awareness of mini-c creativity can help educators recognize that not only do students' mini-c insights have the potential to develop into external expressions of creativity but also such insights and interpretations can (and should) be considered creative in their own right.

As Vygotsky ([1967] 2004) argued, "Any human act that gives rise to something new is referred to as a creative act, regardless of whether what is created is a physical object or some mental or emotional construct that lives within the person who created it and is known only to him" (p. 7). Thus, whatever the creative product (be it an idea, paintings, or performance) or the magnitude of that product (be it little-c or Big-C), it all starts with the imaginative and personal interpretations of mini-c.

Recognizing mini-c Insights

Teachers can go a long way in supporting students' creative potential by recognizing the mini-c insights that students have as part of their everyday learning of academic subject matter. Instead of dismissing students' unexpected (yet potentially creative) ideas, teachers who support creative expression will help their students clarify, re-voice, and, when necessary, reconsider their novel ideas and interpretations.

Recognizing and encouraging the expression of students' mini-c insights serve at least three purposes. First, it helps students develop confidence in their own creative potential. For instance, Beghetto (2006) found that positive teacher feedback about students' creativity was the strongest unique predictor of students' confidence in their own creativity. Such confidence is critical as it

increases the likelihood that students will take the intellectual risks necessary to share their mini-c insights, interpretations, and ideas (Beghetto, 2009a; Nickerson, 1999).

Second, encouraging students to share their unique ideas is necessary if teachers want to help students develop their mini-c (personal) interpretations into socially vetted ideas and understandings. Teachers who support the development of students' creative potential do so, in part, by helping their students become aware of academic subject matter conventions and constraints, teaching students how to articulate the relevance of their mini-c ideas in light of those conventions and constraints and, when necessary, helping them realize that it is sometimes necessary to let go of some ideas in search of more generative ones.

Finally, encouraging students to share their mini-c insights – and providing informative feedback on those insights – can enrich other students' learning and understanding. When students have an opportunity to share their unique and meaningful strategies for solving problems in mathematics, for instance, other students can develop a more nuanced understanding of the nature of mathematical reasoning. The same can be said for most any subject area (be it unique interpretations of an historical event, novel insights about a scientific phenomenon, or a new way of interpreting the meaning of a poem). Providing students with opportunities to find their own path through problems and share their unique ideas is a sign of a powerful learning environment (Duckworth, 1996) – a learning environment that supports the development of creative potential.

In sum, teachers who support the creative potential of their students welcome and work with – rather than dismiss and suppress – students' unexpected interpretations and insights. This involves taking the time to hear and attempt to understand students' mini-c interpretations, helping students recognize when their contributions are not making sense given the curricular constraints of a particular activity or task and providing multiple opportunities for students to practice developing the skills of a particular domain or task (Beghetto, 2007b). These strategies, like other practical suggestions for supporting creativity (highlighted in various chapters throughout this book), stress the importance of teachers recognizing students' creative potential while at the same time introducing students to the conventions, standards, and existing knowledge of the various academic subject areas. As a result, students can develop the requisite academic subject matter knowledge necessary for moving from mini-c interpretations to little-c expressions of creativity.

EVERYDAY (LITTLE-C) CREATIVITY

Everyday, or little-c, creativity refers to the creativity accessible to most anyone (Richards, 2007). Examples of little-c creativity include a fourth-grader's

drawing displayed at the local grocery store, a group of high-school actors' unique interpretation of *The Crucible*, and a middle-school teacher's original way of teaching grammar. Little-c creativity rarely garners the same level of pop culture attention as Big-C creativity, with the exception of sometimes highlighting cute and clever comments of a young child being interviewed on a televised talk show or the unique twist put on classic recipes submitted by readers of a popular cooking magazine.

Although pop culture pays only passing attention to little-c creativity, several theories of creativity have focused on this more everyday level of creative accomplishment. Ruth Richards' theoretical conception of everyday creativity, for instance, underscores the vital importance of not over-looking or denying the expression of little-c creativity (see Richards, 2007). Amabile's (1996) Componential Model of Creativity is another example of a theory that has relevance for more everyday or classroom level creativity. This theory highlights three components that seem necessary for creative accomplishments to occur: domain-relevant skills (e.g., learning how to play a musical instrument), creativity-relevant skills (i.e., the ability to synthesize and combine musical notes and scales in unique ways), and task motivation (i.e., the requisite commitment to put in the hard work and sustain that effort in the face of challenges).

Little-c Expectations

The little-c category is a reminder that creative expression is possible for most any student, in almost any curricular subject area, on almost any given day. Teachers who support little-c creativity in their classroom recognize that creative expression is not a distal goal or extracurricular activity but rather a seamless part of their everyday curriculum.

Elena Grigorenko and her colleagues (Grigorenko, Jarvin, Tan, & Sternberg, 2008), for instance, demonstrated how little-c creativity can be "naturally integrated into teaching and assessing domain-specific knowledge" (p. 304). Their work is particularly compelling because it focuses on the use of curriculum based assessments of creativity, which offer teachers ways to monitor and support creative thinking proficiency as part of their regular teaching of the academic curriculum.

Teachers who integrate creativity into their regular curriculum do so by including little-c expectations in their everyday learning activities, assignments and assessments. As Grigorenko and her colleagues (2008) have explained:

The learning of new content in all areas lends itself to creative exercises. For example, when learning new math applications, students can be asked to imagine new, futuristic, or fantastical uses of such an application. Facts learned in a science exercise can be employed in visual creations (pictures and illustrations, e.g., Draw a scenario in which some typical behaviors of a sea anemone are included); in verbal creations (sentences or stories,

e.g., Write a sentence or story about sea anemones employing some facts that you have learned); as well as in numerical creations (mathematical equations or relationships, e.g., Come up with some equations that describe quantitative relationships that are important in the life cycle or in the environment of a sea anemone). (p. 305)

In addition to integrating expectations for creative expression in everyday assignments and assessments, creativity researchers have also stressed the importance of monitoring the motivational messages sent by common teaching and assessment practices. Recommendations based on a summary of this work (see Beghetto, 2005) include (1) focusing students' attention on interesting and personally meaningful aspects of tasks; (2) providing students with opportunities to generate a wide array of novel ideas and then helping them focus their attention on selecting the most promising and appropriate ideas for a given task; (3) minimizing the pressures of assessments, grades, and other forms of evaluation; (4) encouraging students to focus on self-improvement, increased effort, and seeking help from others when necessary; (5) helping students frame mistakes as a natural and necessary part of learning; and (6) helping students focus on what grades mean with respect to what they did well and how they might improve in the future.

In this way, little-c creative expression becomes part of (rather than an add-on to) the curriculum. Teachers who include little-c expectations as part of the regular curriculum not only provide students with an opportunity to develop confidence and competence in their creative expression but also help to debunk entrenched myths and stereotypes about creativity (such as, only certain people can be creative, creativity is only appropriate in the arts, and so on – see Plucker et al., 2004, for an overview).

PRO-C CREATIVITY

Pro-c creativity represents developmental and effortful progression beyond little-c that has not yet attained Big-C status. Consider the hypothetical case of Wanda, who earned her doctorate in science education. Her dissertation explored methods for teaching aquatic science to youth attending high-poverty schools along the Pacific Coast. She later received a small grant and conducted a study on how science teachers used both in-class activities and out-door excursions to reach their students. After publishing this research in a peer reviewed journal, her next project (on scientific reasoning in elementary classrooms) won an award for the best paper published that year on that topic.

If we stick to little-c/Big-C distinction, where do we place Wanda? Categorizing her efforts in the little-c category diminishes everything she has accomplished. Yet placing Wanda in the Big-C category is equally inappropriate. Her work is creative and has attained a level of creative acumen in a professional field, but she has not made the kind of contribution that will

place her in the history books. The Pro-c category offers accomplished creative individuals, like Wanda, their own category.

Anyone who attains professional-level expertise in any creative area is likely to have attained Pro-c status. Not all working professionals in creative fields will necessarily reach Pro-c (a street artist at *Disneyland* who draws quick caricatures of tourists, for example, may make a good living but may not necessarily be Pro-c level creative in his or her craft). Similarly, some people may reach Pro-c level without being able to quit their day jobs. Some areas of creative expression may not provide enough monetary sustenance to allow financial freedom from other responsibilities. Yet many "amateur" artists are being creative at the Pro-c level, even if it is not their primary means of support. Most poets, for example, earn the majority of their income from teaching (or other work). A poet who has published in many top literary magazines may be highly respected yet unable to make a living solely from writing.

Although many creativity theories have focused on Big-C or little-c, there is at least one that seems more suited for Pro-c levels of creativity: the Propulsion Theory of Creative Contributions (Sternberg, Kaufman, & Pretz, 2002). Sternberg's theory highlights eight different types of creative contributions. The first type, *replication*, primarily keeps the status quo of earlier creations by reproducing past work (e.g., movie sequels, such as the seemingly endless, yet slightly different, string of *Friday the 13th* horror movies). The remaining seven types of creativity, in contrast, highlight more profound contributions. *Reinitiation*, for instance, represents contributions that move some field to a new starting point and then progresses from there (e.g., the development and progression of American jazz music). And *creative integration*, which merges two diverse domains, can result in new genres and transformative paradigms (e.g., George Lucas combining samurai movies, ancient myths, and science fiction to create *Star Wars*). Pro-c is often seen in and across these various types of creative contributions.

Of the eight types of contributions in the theory, *replication* is perhaps most relevant for the classroom (e.g., a high school student writing a sonnet in the style of Shakespeare). The other types of contributions speak to large scale innovations that usually take many years of intensive study and expert skill development and, therefore, are not feasible or directly relevant for the typical classroom.

The concept of Pro-c is consistent with the expertise acquisition approach of creativity (Ericsson, 1996), which stresses that creative expertise results from many years of deliberate practice in a particular domain. Typically a decade (or more) of intensive preparation is necessary to become an international performer in a broader range of domains including chess, sports, the arts, and science (Hayes, 1989). These years are not necessarily spent simply learning and following standard protocol but rather actively experimenting and exploring (Gardner, 1993). There is also evidence that it may take even longer than ten years of active acquisition. For example, Kaufman and Kaufman

(2007) analyzed contemporary fiction writers and found that there was a further time lag (also approximately ten years) between an author's first publication and a peak publication. This finding is consistent with Simonton's (2000) work with classical composers, which suggests that although it does take about ten years to learn a field, it may take additional time to reach a level of eminence. Some domains that focus more on consistent strong performance (such as chess, sports, and medicine) may only need ten years, whereas domains that require a variety of styles and ranges may take longer (Martindale, 1990).

Pro-c Goals

Although most K-12 students will not be in a position to produce Pro-c creations, including examples of Pro-c level creativity in the curriculum can still offer long-range goals for which students can strive. Teachers can support the development and students' movement toward attaining such goals by developing assignments and activities that highlight the specific skills, knowledge, dispositions, and strategies necessary for creative work in and across various academic disciplines (see also Piirto, 2004).

Science teachers, for instance, can have their students investigate the types of knowledge, training, and creative aspects of developing and conducting scientific inquiry. Students in language arts classes might be asked to consider the creative and imaginative aspects involved in writing (including everything from novel uses of language and grammar to how story ideas are generated and represented in various types of narratives). Math teachers might help their students explore the more creative and imaginative aspects of mathematics – everything from how mathematicians work with highly abstract concepts to the aesthetics of visual representations of quantitative data.

Teachers can also support students' understanding of creativity in the professions by inviting visits from local Pro-c professionals (e.g., architects, scientists, professional artists, novelists, and so on) who can help youngsters understand what it takes to be creative in various professions and academic disciplines. This might include everything from the type and amount of professional training required to how creativity is judged in that particular profession (e.g., peer review, critics, connoisseurs, etc.). Providing students opportunities to hear from and ask questions of Pro-c professionals can go a long way in sparking (and sustaining) students' interest in how creativity might be expressed in and across various professions.

LEGENDARY (BIG-C) CREATIVITY

As we have already mentioned, legendary creative accomplishments occupy a great deal of attention – both in the scholarly literature and pop culture representations. Indeed, many of the iconic images of creators come from television, film, and other sources of media. Consider for instance, the *A&E Biography*

television program, which highlights well-known creators from history, or movies such as *Pollack*, *Amadeus*, or *Capote*, which offer fictionalized portrayals of genius-level creators. Big-C creativity has also garnered a great deal of attention among creativity scholars, including Simonton's (1994) work on greatness; Gruber's (1981) compelling case study of Darwin's notebooks; Gardner's (1993) case histories of Freud, Einstein, Picasso, Stravinsky, Eliot, Graham, and Gandhi; and Nandy's (1995) studies of creative scientists and mathematicians, including the great Srinivasa Ramanujan. Many of the most prominent theories of creativity focus on the most highly accomplished creators but also highlight how creativity can differ both by domain (e.g., artistic versus scientific) and type of contribution (incremental versus transformative).

Csikszentmihalyi's (1999) Systems Model, for instance, describes how accomplishments in a particular domain (such as art) are judged to be creative by gatekeepers of that domain (critics, curators, collectors, and fellow artists). This theory highlights how eminent levels of creativity are different across domains (partly because accomplishments are being judged by different criteria, conventions, and constraints).

Big-C Exemplars

Although nurturing students' smaller-c creativity is what teachers can most readily incorporate into their curriculum, legendary creators can serve as important illustrations of the highest levels of creative achievement that have occurred in various disciplines. Such Big-C exemplars can serve as particularly powerful illustrations for students when they are considered in light of the full trajectory of creative development – exploring not only how these creators progressed from having mini-c insights to producing Big-C breakthroughs, but what kinds of supports, setbacks, and chance occurrences were involved along the way. Including Big-C biographies in the curriculum can help capture students' imagination, raise important questions, and even dispel misconceptions about major creative contributions in particular fields and professions.

When sharing legendary biographies, educators need to be careful that they are not reinforcing persistent and pernicious myths about creativity (e.g., only certain people have creative potential) but rather use these biographies to illustrate the domain knowledge, access to resources, confidence, effort, and chance opportunities necessary to go from mini-c insights to trend setting breakthroughs (see also Simonton, 2004).

MAKING ROOM FOR CREATIVITY IN THE CLASSROOM: NOW AND FOR THE FUTURE

As we finish this chapter, the United States stands at a potential crossroads in many arenas – including educational policy and practice. During the past ten

years or so, increased pressures have been placed on teachers to meet content standards (often at the expense of creative teaching and learning). It is unclear whether the years to come will result in more balanced educational policies (which recognize the importance of nurturing student creativity) or further exacerbate the creativity and curricular divide.

Although the future is uncertain, we remain optimistic and confident that whatever the future holds there will always be creative teachers who are committed to finding ways to integrate creativity in their curriculum. We hope that the ideas presented in this chapter help current and future educators develop new and more powerful ways to support the development of students' creative potential within the curricular constraints of the various academic disciplines.

We recognize that such work can be as challenging as it is exhilarating – particularly in the face of ever-increasing external curricular demands and constraints. Fortunately, the authors in this volume provide a variety of insights into how to navigate and work within such constraints as a means for nurturing the creative potential of all students.

Perhaps most important, in a classroom context, are the caring teachers and their allies (be they parents, researchers, or fellow educators) who are truly committed to providing opportunities for students to develop their creative potential – from the mini-c level upward. We admire all teachers who are committed to this effort and hope that our ideas can in some way further inspire and support your important work.

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