Chapter 9
Takeaways: Global Influences on Dynamic Creative Exploration

9.1 Overview

Paradoxically, “creativity is a dynamic phenomenon” (Beghetto & Corazza, 2019a, p. 321) in accountability-bound world cultures. If it can be said that creativity acts and actions “use culture while, at the same time, renewing it” (Glăveanu, 2016, p. 1), then creativity research can be framed, designed, and operationalized with this perspective in mind. By dynamically adapting creativity frameworks to uncover perspectives on, and experiences of, education in creatively deprived cultural spaces, creativity becomes enlivened in exciting new ways, such as through advocacy for a cleaner world and better life. A chief precept in Revealing Creativity is that existing models of creativity—like the Four C (4-C) Model of Creativity—can be utilized to
inform, interpret, and probe ideas of creativity in and across (testing) cultures (Mullen, 2019c). This assumption echoes Beghetto and Corazza’s (2019b) viewpoint as articulated in Dynamic Perspectives on Creativity and the work being advanced on cultural creativity by an increasing number of creativity researchers using qualitative (and quantitative) research methodologies (e.g., Glăveanu, 2016; Karwowski, 2016; Ness & Glăveanu, 2019).

Another beliefs-infused foundational idea is that “creativity can be understood as a process rather than a product, and processes are by definition dynamic” (Runco, 2019, p. 182). As a (dynamic) process, creativity can be interpreted, approached, and studied as such. Applications and interventions of creativity support this notion, legitimizing it as a possibility for both understanding and experiencing preliminary work in glocalities. For example, new uses of research-informed creativity models can shed light on Hidden-c creativity, the potential to be discovered in all educational settings and places of learning under duress (also, Mullen, 2019c).

In the journey that became this book, three global/world influences affected my 4-C creative intervention: creativity crisis, curriculum shortfalls, and creativity constraints. Counterforces—creativity process, dynamic adaptation, and creative exploration—also shaped the research and results. I describe these forces and counterforces, referring to the literature reviewed and research conducted. Because readers might be navigating these influences/forces within glocalities where restraints inhibit dynamic creativity, I expound on each influence keeping in mind that while we are influenced by global forces, we can in turn exert influence. Many scholars (e.g., Robinson & Aronica, 2015) characterize education in the creativity economy as largely accountability-bound, even bankrupt, within test-centered nations. I’m among those who nonetheless feel compelled to engage with and reveal creativity wherever and whenever possible. Considering a pessimistic outlook on the state of creativity in the world, it might not be surprising that despite the careful, intensive planning around my informal 4-Cs creativity program, in reality it could have failed. I placed myself in college environments that were foreign to me, among people unknown and amid unexpected institutional and world fluxes. The global influences on creativity I depict likely demand monitoring within rapidly globalized learning environments to enable conditions for experiencing dynamic creativity.

I shift to briefly convey my meta-reflection on the research questions and what was discovered from this pedagogical study before turning to the global influences on creativity.

### 9.2 Meta-Reflection on Research Questions

The three transnational contexts portrayed in Revealing Creativity were all examined to determine whether diverse college students and educators can discover creativity when encouraged under educational constraint. As per this line of inquiry, it
was found that the populations studied were able to reveal creativity. With pedagogic guidance, creativity under duress was recovered and fostered, which implies that creativity can indeed be discovered in accountability-bound learning environments.

As far as new ideas that might be added to the social sciences canon, educational knowledge, and, specifically, the creativity paradigm, an overarching perspective is: *The 4-C theory-informed framework was meaningfully interpreted by participants neither familiar with it nor from educational psychology.* Because of this outcome, it appears that my 4-C creative intervention productively operationalized the creativity framework within the Chinese, Canadian, and Australian glocalities. A related takeaway is that *dynamic creativity was enacted, with identifiable creativity processes and learning outcomes, despite constraints from the global environment and those strategically “imposed” (by me) within the pedagogically designed settings.*

A second main message is that *the personal power of creativity—Hidden-c—was triggered by the 4-C creativity program of activities and animated through it.* High engagement was from activist oriented stakeholders involved in social movements. A lesson learned from the creative exploration is that *if creativity can be understood and appreciated as a process, even a “messy” one that is highly individualized from one person, context, and culture to the next, then the glimpses afforded can “count” as having value.* As such, authentic engagement in the creative process and space was the constant, not the production of things or exaltation of individuals. The social construction of creativity was evident in both undergraduate and graduate students’ dialogical interactions and results, and in the connectivity between and among interviewees and me. This finding raises thought-provoking ideas deserving of contemplation. With culture as a point of reference, it comes to mind that the creativity typology adopted in this book might *not* fit when analyzing culturally specific responses or the cultural behavior of particular groups. One might wonder about the conceptualization of the 4-Cs when developed only with reference to the responses of Indigenous residents: Would a child who advocates climate change to rescue Indigenous habitats and restore life be thought of as displaying Big-C? Or, must the child be invited to a globally recognized platform to qualify his or her C?

On point, a reflection from the research is that creativity’s “complex characteristic” allows for analysis “on many levels (e.g., from mini-c to Big-C) in various domains;” making “it easier for people to accept the assumption that creative potential may be developed” (Karwowski, 2016, p. 167). Further, Karwowski (2016) asserted that the 4-C typology, like any popular theory of creativity, does not have to be “culturally universal”; for, “perceiving and defining creativity is reflected in [its] validity” and “in the quality of conclusions drawn on the basis of studies with the use of methods devised in different cultural conditions” (p. 177). Based on ethnographic studies that include their own, Ness and Glăveanu (2019) bring to the conversation about creativity and culture the importance of “social” and “cultural” dimensions of creativity. Dialogue proved essential among the organizational participants in “multidisciplinary groups” for engaging dynamically in creativity, collaboration, and learning. Advancing the concept of “dialogical creativity,” they
proposed from their fieldwork with organizations the “pre-condition of dialogue” in
dynamic relationships within cultural environments (p. 189). Interestingly, they
envision their conception of creativity as serving a purpose other than replacing
creativity theories and approaches—they aspire to heighten awareness of “a social
and cultural basis” in work others are doing (p. 203). In hindsight and with rele-
vance for my 4-C transnational study, I ask, how might knowledge of cultural and
social forces assist with culturally enriching creativity knowledge and paradigms?
Might the power of Hidden-c that manifests in culturally distinct ways help stimu-
late possibilities for theorizing and reimagining creativity? Enhancing models and
applying them? Renewing creativity and culture?

A third key idea takes us to E3C, a continuum of creativity from experience, to
expression, and enlivenment. A set of dynamic processes, E3C can be approached in
such a way as to trigger Hidden-c—the dynamic potential to be discovered in all
educational worlds. The arousal of Hidden-c feeds one’s creative capacity for
authentically engaging in the experiencing, expressing, and enlivening of creativity.
Instead of a one-off experience, possibilities can accrue from creativity that live
beyond singular experiences and expressions to experiences and expressions that
awaken, even exalt, the imagination and have impact. With the enlivening of cre-
nativity, visions can be animated of a future-oriented present (e.g., E3C in Australia
emerged as daily creative practice and breakthrough innovation in support of eco-
smart, sustainable worlds that are inseparable from educational study). When we
construe dynamic creativity as a continuum, it might be that opportunities increase
for the experience, expression, and enlivenment of creativity to unfold. Current
research findings and reflections of mine on others’ studies create a possible bound-
ary shift in theorizing creativity from the 4-Cs typology to a possible 4-Cs + Hidden-c
+ E3C theory of dynamic and emergent creativity or creativity across boundaries.
Taking my own transnational explorations as examples, future research can enrich
the theorizing of creativity from exploring models, emergences, and actions.

Being intentional about igniting Hidden-c dynamically and interpersonally
through E3C and the 4-Cs has implications for theory, research, and practice.
Theorizing dynamic creativity as a continuum (i.e., E3C) could lead to research
being designed around not only the experience or even expression of creativity but
also the enlivening of it, such as through imagined worlds (e.g., the protection of
oceans and marine ecosystems) and anticipatory human actions (e.g., creative activ-
ism through environmental protests, worldwide, on behalf of the planet). When cre-
avtivity is implemented at the level of practice in classrooms and other learning
spaces, it may be that the enlivening of it is not typically thought through or
addressed. While enlivenment does summon the unseen and the unknown, it can
excite new vistas previously unexplored that inform, perhaps even harness, power-
ful experiences and expressions of creativity. A curricular program built upon E3C
can even begin with enlivenment as the starting point for creative discovery, explic-
itly linking the imagination and future mindedness to the entire creative process and
to hoped-for impacts (e.g., oceans purged of human waste).

Interestingly, Hidden-c was cultivated by E3C dynamics in the glocalities I stud-
ied without my attention on anything other than authentic creative engagement and
expression in different accountability-bound cultures and, as insight deepened, “the dynamic and evolving quality of the relationship we develop with others within a shared cultural environment” (Ness & Glăveanu, 2019, p. 189). This only serves to underscore the point that creativity-deficit places could stand to benefit from thought and design behind these ideas through which “social exchanges that are at the heart of creativity” are guided (Ness & Glăveanu, 2019, p. 189). Igniting Hidden-c dynamically and interpersonally through E3C can be the target of a creativity program, practice, or study, affording more of a macro-view of creativity’s intangibles like its unseen/unknown outcomes. As such, thoughtful consideration of E3C could encourage theorizing, researching, and practicing around profound educational and societal change. A takeaway is, E3C as a concept and set of dynamics has the potential to enrich theory, research, and practice, and that a fuller excavation of it in accountability-bound cultures can extend the potential for impact while building greater capacity for dynamic creativity.

A fourth central point concerns the notion that creativity “spans disciplinary boundaries” and that the work can be multidisciplinary and even transdisciplinary (Henriksen, 2018). Bridging the individual with the group, multidisciplinary teams, utilizing diverse perspectives, have proven innovative (Ness & Glăveanu, 2019). As a takeaway, the very nature of creativity posed a challenge for faculty and leaders (non-creativity researchers), who struggled with the fit of creativity and my 4-C creativity program. Moreover, while giving public talks and even lecturing in classes as a visiting professor were recognizable discourse-styled actions in the university cultures, staging interviews with stakeholders and guiding students in dialogic activity-based groupings were not. As underscored in qualitative creativity research in this vein, group creativity can support free expression and exploration, and dialogic exchanges can build creative cultures within educational milieus (e.g., Mullen, 2018) and organizations (e.g., Ness & Glăveanu, 2019). A final “lesson” is that global influences on creativity can be usefully navigated within glocalities as well as confronted and transformed through counterforces.

I now turn to the force–counterforce tension to describe and visually depict it. In the discussion of each global influence, the counterforces shine through at different points, with references to the educational literature and my research. You might consider it helpful to be aware of these influences on creativity and how I navigated them should you (or someone you know) similarly find yourself in a foreign college environment.

9.3 Global Influences on Exploring Creativity

Figure 9.1 introduces the next three sections by depicting prevailing global forces that influence creativity across the dimensions of understanding, experiencing, and exploring it. Three overlapping circles are on the graphic. In the upper left, the circle is labeled creativity crisis. The circle in the upper right is categorized curriculum shortfalls. The lower circle, just as important and equal to the other two, is identified...
as creativity constraints. Counterforces across these domains are creativity process, dynamic adaptation, and creative exploration. While the global influences seemed formidable for nurturing creativity, these counterforces enabled creativity.

### 9.4 Creativity Crisis: Global Influence 1

A creativity crisis has been identified in the West and especially the East by the popular press and creativity and curriculum scholars worldwide. According to a crescendo of voices from schools and colleges, the crisis seems pronounced in nations where the Programme for International Student Assessment (PISA) has been adopted, classroom learning is rote, and standardized pedagogy and learning outcomes squelch creativity. Within PISA testing nations like Australia, Canada, China, and the United States, creative education has suffered. Consequently, creativity and other global competencies have been under strain, weakening nations along with individuals’ creative capacities, educations, and futures. Ironically, by burdening schools and narrowing curriculum, testing regimes contradict the message of employers worldwide—creativity is a global competency expected of workers.

Educational creativity deficits plague the university cultures I researched. But these in no way characterize in absolute terms the state of creativity in China, Canada, and Australia. Considering participating educators’ perceptions and capacity for authentically performing the 4-C creative activities, clearly there is hope. From the research I reviewed, while many aspiring and practicing preK–12 teachers value creativity, creative pedagogy and learning are not commonly cultivated in the twenty-first-century classroom. Of great importance in contemporary times, Kim (2011) found that student creativity has declined—from kindergarten through 12th grade—based on Torrance Tests of Creative Thinking scores. Across many personal
creativity dimensions, statistically significant drops (approaching deficits) were detected in the capacity to be emotionally and verbally expressive, imaginative, energetic, passionate, perceptive, and unconventional; also affected was the ability to connect and synthesize things, and see from different angles. Creative interventions like mine show great promise for helping college students who have been socialized in stymied schooling systems express creativity.

As many college faculty likely realize, postsecondary education is intrinsically connected to, not divorced from, preK–12 schooling. At a systems level, governments in different nations push for intensified accountability and high-stakes testing, endeavoring to satisfy the public’s need for answerability, confidence, and transparency in the standards and outcomes of schooling. However, an unintended consequence is the near extinction of creativity. In fact, performance-based accountability reforms have spread within accredited colleges. Reflected in curricula, assignments, expected learning outcomes, and testing, accountability measures are firmly entrenched in professional accreditation, licensure, and certification standards in teacher education. Thus, K–20 performance-based reforms overshadow program preparation of college students for work in the creativity economy, and teachers and leaders for careers within curriculum policy contexts.

As quick examples, consider Australia and Canada. Creativity is seen as desirable in schools, but guidance on what it is apparently lacks, along with “language about what practices actually sponsor creativity” (Henriksen, Creely, & Henderson, 2019, p. 8). High-stakes testing in Australia, and K–20 performance-based metrics, reduce the space for creative practice. These problems presumably continue in higher education, except when college faculty incorporate creativity in their programs. As another point of reference, note that high stakes are attached to the testing performance of preservice teachers in Queensland’s education system—their test results in “literacy, numeracy, and science” are “tied” to “registration requirements” (Klenowski & Wyatt-Smith, 2012, p. 69); not coincidentally, “literacy and numeracy” assessments were mandated for “all students in Years 3, 5, 7, and 9” (p. 65).

These findings also resonate for other testing cultures, such as Canada’s, based on studies of teaching. Kempf’s (2016) large-scale study of Canadian trends in creativity and accountability identified a decrease in creative teaching and learning within the nation’s preK–12 educational systems, largely attributed to the expansion in high-stakes standardized testing. (The United States and other countries remain more burdened by testing than Canada.) Without intentional creative intervention, the lack of creative practice inhibits education at the college level, particularly within professional programs that prepare preservice teachers and leaders. Across systems, creativity is suffering, from the early years of schooling through adolescence, affecting the future of societies.

A conviction shaping this book is that college students should have as many enrichment opportunities as possible to develop their creative and collaborative capacities. Under the leadership of creative educators, they can be encouraged to persevere and take risks. College students and graduates can transfer creative skills and knowledge from theory-informed quality teaching and learning to their current and future classrooms, thereby enriching countless pupils. To renew creativity,
preK–12 and college teachers can generate opportunities even within the most regimented curricula.

For example, newly founded in 2019, the Creativity in Research Engaging the Arts, Transforming Education (CREATE) Centre at the University of Sydney, Australia, has brought together collaborators from education and the arts (e.g., theater companies) to change the tide so that creativity can thrive again, but in entirely new ways. The CREATE founders seek to “create dynamic places and spaces for imaginative learning and ensure our young people are equipped for [challenges],” based on recent Australian research that “suggests that re-imagining how we prepare for the world of work—and equipping our future workers with interpersonal skills and creativity—could contribute $36 billion to our economy” (Zaglas, 2019). The future might be right around the corner, but it is also a living construct. The future is acted upon in the present through demonstrable acts of imagination, vision, intention, and collaboration.

9.5 Curriculum Shortfalls: Global Influence 2

When creativity in academic learning is not explicitly promoted or connected with academics and courses, as is often the case, classroom teachers mirror these curriculum shortfalls. Even though preK–12 teachers tend to value creativity, they can feel blocked due to mounting external accountability pressures, being ill prepared to teach creatively and inspire originality, confusing creativity with the arts, and holding beliefs that affect how they see creativity and creative people. Without knowing creativity theory and research, and by misperceiving creative behaviors as, for example, “misbehavior,” they struggle to identify creativity in others and facilitate creativity (Mullet, Willerson, Lamb, & Kettler, 2016). Teachers dealing with mandatory testing and test-centered curricula often feel confined pedagogically and overwhelmed, so it’s not uncommon for them to relinquish creative activities valued and enjoyed in their classroom, including cooperative group work, the arts, physical activity, and recess. College faculty experience stress too and face some of the same barriers to creativity.

Not to be overlooked, though, are those preK–12 teachers (and college faculty) who cope creatively, and even courageously, with constraints that are imposed. Doyle’s writings (e.g., 2019), based on her teacher interview study, recognize creative work with problems in the classroom. Deliberately facilitating their students’ creative learning and artifacts, these teachers not only experienced a transformation in their understanding of the content but also of themselves. At all levels, teachers and faculty who create favorable conditions for creative engagement, expression, and collaboration mitigate unwelcome circumstances. Reclaiming the art of creativity in preservice teacher and leader programs necessitates change agency. Narey (2019) refers to this creative capacity as “questioning the status quo,” especially in systems of standardization around social inequities and injustices (p. 325). Kauper and Jacobs (2019) referred to critical thinking aimed at social justice as “creative
subversion,” which involves “disciplined improvisation within the existing systems and frameworks of schools” (p. 347).

As Beghetto (2019) reminds us, constraints like controls are inevitable and these can be used to aid, if not structure, the “uncertainty” associated with creative experiences. Years earlier, he expressed the importance of not only acknowledging this dilemma but also finding a curricular balance. About the constraints on creativity, he stated:

Current accountability movements in public education, marked by increased use of high-stakes testing, can contribute to teachers feeling pressured to quickly cover content. Teachers may feel that they simply do not have the time (or resources) to allow their students to adequately explore, interpret, and meaningfully engage in all of the topics that they teach. (as cited in Beghetto & Kaufman, 2007, p. 301)

In response to this dilemma, he asserted,

[Nonetheless], we still believe that teachers can strike a balance between covering required content and encouraging students to explore, interpret, and make personal meaning of what they are learning. For teachers to move to this more balanced approach, educators must . . . develop a more interpretative view of learning. (as cited in Beghetto & Kaufman, 2007, p. 301)

Everyday creativity in (preK–12) classrooms—igniting as Mini-c and Little-c discoveries—is a conduit for striking a balance between creativity and accountability. Content that is regulated must be offset with exploratory subject matter and meaningful creative learning. As such, teacher “balance” between mandatory and “interpretative” content can help ensure quality educational experiences. Curriculum shortfalls can be offset through teacher questioning, challenging, and subverting normative expectations in support of creative adjustments.

9.6 Creativity Constraints: Global Influence 3

Constraints on creativity can be thought of as inevitable and natural. The very selection of theories/models/frameworks for pedagogical research is an example. Choosing a theory to unpack, framed as 4-C exploratory pedagogy in my case, triggered both restrictions and possibilities. The 4-C creativity typology (i.e., Beghetto, 2019; Kaufman & Beghetto, 2009, 2013) proved appealing as a conceptual organizer for interpreting, experiencing, and classifying creativities. My utilization of this model meant that I was taking on its embedded worldview and assumptions. Yet, with the 4-C framework, I could guide others’ theorizing, brainstorming, collaborating, and creating while providing an opportunity for autonomous thinking and creatively connecting ideas—all while navigating controls (e.g., timed tasks). I had good cause to feel hopeful about implementing the model in glocalities unknown to me, for the value of the 4-C theory has been established. Also, the argument that creativity can thrive under constraint struck me as realistic. But I was also taking a creative risk. Making time for creativity goes against the priorities of busy people contending with life in performance-driven cultures.
Another layer is that when creativity is valued in education within such institutions, it’s typically tied to prestigious disciplines like science and medicine and products with commercial promise. The creativity-as-product standpoint can drive creative processes in a particular way, thereby limiting the generative and possibility space. This steadfast Western conception of creativity as a thing, and “creative things” as products expected to be “original” and effective” is something Runco (2019) interrogated. Going a step further, he claimed that creativity does not even depend on a product or being recognized. In concert with these ideas, from the outset, the traditional standard for what counts as creativity—products and recognition—proved too narrow for my creative intervention. What came from the application in China, Canada, and Australia were responses and ideas, examples and artifacts—and even these “outputs” were uneven, variable, and individualized across the sites, thereby not satisfying the standard definition of creativity. All in all, my eclectic methods offer starting points for others.

A lesson is, creativity should not be avoided due to stresses and strains. When in the field, I kept in mind that I could both elicit and capture everyday creativity despite the constraints and uncertainties (Beghetto, 2019). While it might sound counterintuitive, restraints can be acted upon and used to facilitate creative thought and action, problem-solving, and process and artifact. We can even “story” interferences as dynamics of creativity, as I have attempted to do. Educators live with restraints every day—some we impose ourselves without thinking about it (e.g., course syllabi and readings, expectations for success, specified options and choices, and assessment rubrics).

To briefly illustrate constraints from Chapters 4, 5, and 6, the Chinese, Canadian, and Australian students, respectively, were invited to collaboratively apply the 4-C creativity model with peers (none of whom they knew). Also, they were restricted to a compressed timeframe (and, in two of the nations, a sheet of paper for artifact production). Discouraged from accessing technology or outside resources, they were “forced” to “show” creativity.

When any learning route or medium (e.g., paper) is chosen, constraints are naturally invoked. We just don’t think about restraint this way, with its negative associations. Medium and its selection is an imposition known to artists: “Sculpture versus painting sets material affordances: opportunities and constraints” (Doyle, 2019, p. 49). “Parameters of success,” also a constraint, are intended to help students “fulfill their creative potential and thrive” (Schmidt & Charney, 2018, p. 283). So, in the scheme of things, boundaries of one kind or another, whether imposed or summoned, can propel creative expression, innovation, and production.

In fact, entire domains of thought have been birthed through conceptual constraints that forge new directions. A classic example from the visual arts in American history is abstract expressionism. Valued was “expressivity” in opposition to realistic representation—the movement was created out of resistance to social realism (Doyle, 2019). Constraints—internal and external—range in their manifestations and effects on individuals, communities, and domains. Besides the arts, an example of a creativity constraint in educational research summons design elements serving as governing principles. When arts-based educational research was forming in the
early 1990s, Tom Barone and Elliot Eisner proposed criteria for the qualitative paradigm, including uses of language (e.g., “expressive”), “personal signature” (of the researcher), “empathy” and its promotion, and “aesthetic form” (which they continued to update; see Barone & Eisner, 2012). The expectancy was that some of these be satisfied in arts-based work. These tenets are used today for recognizing, shaping, and assessing narrative and aesthetic research, including dissertations.

For my transnational project, I drew conceptual strength from the premise that creativity is accomplished in everyday worlds (e.g., classrooms) in the face of pressures. But I was also aware that monitoring constraints is important and that compounding psychological, cultural, political, and environmental constraints can aggravate creativity. Empirical research that closely links culture with creativity offered insight: In Niu and Sternberg’s (2001) study, evaluators rated Chinese and American college students’ artwork, finding the latter “more creative.” The researchers concluded that the Chinese students’ creativity was likely reduced due to “restrictive task constraints” or “the absence of explicit instructions to be creative” (p. 225). (Six years later, Niu, Zhang, & Yang’s [2007] outcomes were the same.)

I absorbed this lesson in the development of my creative methods, first trialed in China. To cultivate creativity, I needed to mindfully attend to uninhibited task constraints and overt instruction on creativity. These pedagogic approaches to creative learning, encouraged by Niu and her coauthors, were said to be applicable with student populations in China. Restraints this population endures include hierarchical, standards-driven, and teacher-centered classrooms. The steadfast belief that one is not creative, undermining confidence is also a tenacious barrier; in Chongqing; remarkably, Chinese students’ self-actualization through the creative process was the most glaring to me across the glocalities. While it was also the only place where I could teach a course and conduct self-reported assessments of learning, would one expect the highest creativity to come from the nation with the most rigid accountability?

With my research journey beginning in China, I took Niu’s findings (i.e., Niu & Sternberg, 2001; Niu et al., 2007) to heart for all of my sites. In the three nations, I met many international and study abroad students, some from China, for whom English was a second language. As such, I sought to spark creative thought, engagement, and expression around the 4-Cs by providing a boilerplate, along with supportive materials. Creative and reflective responses were elicited in the constant presence of both limitations and uncertainties. Students were strongly encouraged to connect creativity to their own contexts, cultures, lives, and selves.

In Australia and China, students not only responded to my 4-C prompts but also developed the creative poster (artifact) in concert with the 4-C creativity model. For my own part, I was aiming for creative guidance, not direct instruction that scripts the learning process. (Hammond, Skidmore, Wilcox-Herzog, & Kaufman [2013] briefly explain these classic pedagogies and the distinctions.) This logic was reflected in a parallel way for individual interviewees with whom follow-up questions emerged spontaneously during the conversations.

Assessment is commonly believed to be a restriction on creativity. However, assessments that support the developmental aims of creative activity and learning
(outcomes) are deemed a best practice. Like other creativity researchers, Beghetto (2005) refuted the widespread misconception that appraisal interferes with—or somehow disturbs—the creative process and endeavors. In fact, assessments that reflect theory and research, combined with a developmental perspective of creativity, have been effectively carried out. In universities, creativity assessment contexts include preservice teacher education (see Mullen, 2018) and theater education (see Schmidt & Charney, 2018), and in schools, these cross elementary, secondary, and postsecondary classrooms (e.g., Reilly, Lilly, Bramwell, & Kronish, 2011). A related issue is that the assessment of student creativity is underrepresented in the literature for both the postsecondary and preK–12 levels. Reviewing literature on teacher perception of creativity, Mullet et al. (2016) concluded,

Teachers need an awareness of the variety of theories and definitions of creativity when selecting teaching and assessment tools. Teachers who misperceive creativity could unwittingly suppress creative expression in the classroom; negative or erroneous perceptions of creativity may prevent teachers from recognizing opportunities for developing creative potential in students. (p. 10)

Given that mistaken beliefs “cloud” creativity within the teaching profession, it makes sense that this problem extends to the assessment of creativity.

Creativity studies of college classrooms operationalize Beghetto’s (2005) creed that assessments supportive of creative teaching and learning do not “kill” student creativity. At their home university in Texas, USA, theater educators Schmidt and Charney (2018) used three assessments (i.e., the Creative Achievement Questionnaire, reflective journals, and rubrics) to effectively evaluate student creativity in a learning lab. And they utilized recommendations from research on promoting student creativity in cooperative peer groups (just as I did for this book). Acting on their theory-informed belief that creativity should be assessed when it’s “central” to a program’s “learning outcomes” (p. 283), they studied students’ responses. The information they gathered could “guide curriculum, improve learning outcomes, and help students of theatre reach their creative potential” (p. 271) (Table 9.1).

To the developing discourse on this topic, I would add that we as educators can be heartened that assessment supports genuine engagement, and even enhances ideas for future contexts. “Authentic positive feedback”—a basis for assessment—is vital for helping students with their motivation and development (Hammond et al., 2013, p. 294, also Beghetto & Kaufman, 2007). Relative to this book, assessment took different forms—in China, these were built into the course I taught, which was simply not possible within classes visited in Canada and Australia. In both English and Mandarin, assessment feedback was provided in China not only on the quality of students’ creative accomplishments but also on the extent to which they had collaboratively, resourcefully, and imaginatively dealt with constraints. Underscored was the importance of twenty-first-century skills and capacities, and self-actualizing in this direction. I was also keen to receive feedback on the 4-C activities, especially the perceived value of them.
Table 9.1  Recommendations for future research and practice that build on the 4-C program (C. A. Mullen)

| Recommendation |
|----------------|
| Investigate creativity in PISA nations (wherein creativity is apparently on the decline) to ascertain whether application of the 4-C model can trigger creativity in countries other than those featured herein (e.g., the United States) |
| Bring unique perspectives on, or different interpretations to, the 4-C typology to determine the potential for stimulating creativity (e.g., Hidden-c) in relation to this validated theory-informed framework |
| Explore the 4-C responses of university-based populations in educational disciplines not investigated in this book (e.g., educational psychology) or non-educational disciplines (e.g., science, technology, engineering, and mathematics); alternatively, direct attention at specific demographics (e.g., students of color, females only, international students) |
| Examine how school-based populations (e.g., children and youth; members of marginalized groups) interpret the 4-C program and engage in its activities; to do so, modify the 4-C application to accommodate curriculum, program, or standards expectations and ensure consistency with what is developmentally or culturally appropriate |
| Revise or redesign the 4-C program instructions and group activities (e.g., childhood essay; conversational prompts; poster activity; small/whole group performances; assessments by students of the tasks) or the interview prompts |
| Develop or incorporate performance measures (e.g., survey, self-report) to assess the effectiveness of the 4-C program and activities, such as the extent to which each task was valued; creative self-beliefs can be assessed as indications of participants’ level of confidence with their creative abilities before and after experiencing the activity tasks |
| Engage the same class (or group) more than once, building on activities in such a way as to allow the program to be experienced as fully as possible; make time for teams to report results and for the researcher to seek clarification |
| Use your own classroom or someone else’s in your “glocality” or a foreign location that satisfies the criteria of this 4-C application (e.g., embedded in creativity theory; occurs in a PISA nation; utilizes engagement techniques) |
| Change the physical classroom setting to an electronic classroom or learning space; utilize synchronous (live video) capabilities and software programs to assist with working in groups and creating in a paperless environment |
| Conduct a cross-cultural comparative study that controls for differences in methods (or modalities) to the extent possible so that outcomes can reflect educational, cultural, ethic, historic, political, social, or other particularities |
| Instead of a macro-longitudinal approach to the 4-C program, adopt a “micro-longitudinal” one that enables numerous measurements of the phenomenon under study within short time periods (see Beghetto & Karwowski, 2019) |
| Devise a study that accounts for E’C in an intentional way, thereby potentially generating insight into this continuum and “enlivenment,” the future-minded aspect of educational creativity (beyond “experience” and “expression”) |
| If a theory or model other than the 4-C typology is selected for study, ideas listed in this table can be freely adapted; in addition, it is recommended that feedback be pursued at critical junctures from creativity research experts |

9.7 Farewell and the Future

Hopefully, a picture has emerged from this book that conveys how generative possibilities can come from creative exploration in accountability cultures. As the E’C results indicate, educational creativity was experienced, expressed, and enlivened in
the presence of constraints within transnational cultures applying Kaufman and Beghetto’s (2009) 4-C typology. Through interaction, influences were navigated in the process of moving constructively from creativity theory to theory-informed practice and action. The 4-C framework was methodologically interpreted and converted into an application with human actors whose Hidden-c was triggered and creativity engaged. Activity-based methods like this allow for the enacting of theory and re-theorizing from practice.

I join other researchers who take the lead in college, school, and workplace settings “to reverse the creativity crisis” (e.g., Kaufman & Beghetto, 2013; Kim & Chae, 2019, p. 217; Mullen, 2019c). Some conduct investigations into creativity and education, while others apply creativity theory in real-world practice. These creativity pathways are evident in this book. An edited collection addresses these dimensions of creativity and change—creativity framework, investigation, and application—in various glocalities in which creativity is under duress (see Mullen, 2019a.)

Given twenty-first-century global pressures, I was keen to implement a creative intervention in different nations to explore possibilities for renewing and revealing creativity, despite the odds. Based on research and educational trends, I came to firmly believe that we as educators must go beyond acknowledging and criticizing the creativity crisis, curriculum shortfalls, and creativity constraints. By assuming personal and professional responsibility for interrupting these problematic trends, creativity deficits can be better managed and dynamic creativity experienced. If we ourselves do not plant the seeds of hope and forge opportunities for students (and others) to explore theory-informed creativity within learning environments, then how will creative applications, practices, and actions arise and become frequent occurrences, especially for children and youth?

Enrichment of theory and practice comes from discovering new places where we immerse others—and ourselves—in vibrant creative learning. Taking with us a model or method for creative discovery forges new kinds of engagement with theories and practices (Guerra & Villa, 2019). We make imaginative connections, develop insights, and refine methods within cultural contexts that help us cultivate creative capacities, including Hidden-c. With every form of creative and cultural experimentation we will not see perfection but rather possibilities for promoting, revealing, and releasing creativity. Doing this kind of work within unknown glocalities further excites all of these levels and dimensions of creative learning and risk-taking. Always a project in the making, creative investigations, interventions, applications, methods, and actions can both deepen understanding and advance knowledge. Having the opportunity to meaningfully engage students, faculty, and leaders around the world is truly a privilege and honor—who knows, they might just carry on as social-minded explorers of creativity.

Looking ahead as a field, we have before us a creative challenge—exploring creativity as a dynamic process in places carrying burdens. When thoughtful inquiry and creative learning are enabled, it becomes possible to re-theorize creativity models and ideas. The enrichment of theory, research, and practice that comes from
creative discovery is anticipated for future frontiers of creativity. In this creative spirit, I ended with takeaways for future research that build on my 4-C program, itself organized to discover if there is any creativity left in PISA nations and, if so, what it looks like. Hopefully, these ideas and potential next steps for further developing research-based creativity interventions like my own can assist pedagogically oriented researchers with interest in pursuing this line of inquiry.

The winter of 2020 gives pause and a chance to see things differently amidst the growing uncertainty and unpredictability of these times. This book is being sent into the world during a deadly pandemic when global communities are contending with the rapid proliferation of the COVID-19 disease and when, as human beings everywhere, our lives are being dramatically altered. Academics are navigating the overnight transition to telework, online teaching, and virtual meetings. Concerning research exploration and activity, much needs to be rethought given the directive to cease our normal day-to-day lives and radically utilize online formats. In-person interaction has been reduced to cautionary, restrictive mandates to maintain social distance.

To ensure that human participants are not at risk of harm from data collection, the type of programming and face-to-face activities I developed could be reimagined for distance. To avoid putting research activities on hold, then, researchers/pedagogues could turn to remote technologies, such as video- and tele-conferencing, as alternatives for in-person data collection. For my own studies, I have had to think along these lines. My teaching, mentoring, and advising of graduate students are, increasingly, dependent on digital delivery. I use cloud-based course design (currently, Canvas and Zoom) for courses and pedagogic research. My work situation demands ongoing creative adaptation and improvisation in unforeseen circumstances. While I am located at my university’s main campus in the rural Appalachian region of Virginia, our educational leadership students mostly reside in Washington, D.C. and Northern Virginia. So, I continue to retool, utilizing digital pedagogies for delivery of core curriculum at satellite campuses while investigating creativity and innovation (e.g., Mullen, 2019b). Creative improvisation, with its emphasis on unanticipated decision-making and action, offers a method of creativity research and a way of creating new knowledge.

Creativity explorations begin with a dream. Despite unknowns, dreams take shape in response to uncertainties, constraints, and realities. The metaphoric expression “working differently inside the box” conveys that students can thrive when presented “with opportunities to work through uncertainty in a well-planned learning environment”; similarly, in research situations, participants’ “original expression” can be fostered while they “engage productively with uncertainty” and constraints that are unavoidable (Beghetto, 2019, pp. 34–36).

We are being called upon to reimagine our lives, including how we conduct work and interact, and teach and research. John Lennon’s (2016/1971) beloved song “Imagine” invites dreamers to join in healing the world—and defeating the status quo. Dreaming something into being awakens possibilities imagined and unimagined. The edge of the present is the future.
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