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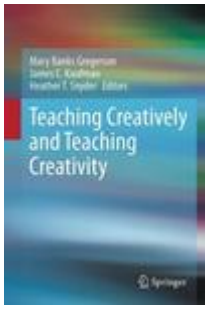
How Does Teaching Creatively Enhance Student Creativity?

A review of



Teaching Creatively and Teaching Creativity

by Mary Banks Gregerson, Heather T. Snyder, and James C. Kaufman (Eds.)

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Gregerson, Snyder, and Kaufman's edited volume is about teaching creatively and teaching for creativity. As the commentator Dean Keith Simonton argues in his concluding chapter, although the two can be treated as separate topics, how the former leads to the latter is of great interest and importance to educators. *Teaching Creatively and Teaching Creativity* helps stimulate new thoughts along this line.

Consider any domain of knowledge as involving the knowledge of how to play the "game," literally or metaphorically, with rules established by experts in the field (Gee, 2007). Teaching creatively is a pedagogical issue of making the game as transparent as possible: how to turn learning materials into something lively, interesting, and accessible to the learner while remaining intellectually true to the domain.

How to bring to life something abstract, dry, or even esoteric is a creative process, which takes imagination as well as skills of rendition on the part of the teacher. In this sense, teaching is an inherently creative act. However, bringing something to life inevitably has to engage learners, rouse their mind, and evoke their agency so that they can "enact," "think about," and "critique" the game they are learning to play and find new possibilities for the game. This learning process is inherently "creative" on the learner's end.

Therefore, I venture to hypothesize an isomorphism of teaching creatively and learning creatively: Modeling knowledge construction and making learning a transformational experience are cocognitive acts orchestrated by the teacher and participated in by the student (often a group of students). The common elements underlying this isomorphism are enactment of knowledge (physical or mental), critical thinking, and imaginative play that transcends what gets "played" and how it gets "played." Teaching creatively means evoking a certain mode of intellectual functioning (active, critical, and generative) for students as well as for teachers themselves.

Teaching a Subject Creatively to Mobilize Creative Agency in the Learner

With this general conjecture in mind, I surveyed the chapters in Gregerson et al.'s volume. Indeed, terms like *active*, *critical thinking*, and *possibility thinking* are pervasively used in the book. Not only so, there seems to be a consensus among contributors that learning a subject is more than consuming a large amount of discrete concepts, procedures, and facts. The essence of pedagogy is to provide proper contexts in which these concepts, procedures, and facts get connected and used to serve particular purposes. Learning "actively," "critically," and "creatively" means constructing or reconstructing foundational and functional knowledge in a way that makes knowledge "owned" and personally transformed by the learner.

Although not all of the 14 chapters explicitly declare this constructivist view of learning as inherently creative, most chapter authors seem to practice this philosophy. This is why science learning gets embedded in an act of designing "Serious Education Games" (Chapter 4), why psychology is taught not by bits and pieces in isolation but in the context of what it is trying to do to decipher the mind and "psyche" (Chapter 5), and why teaching music theory takes a meticulous effort to fashion "creative narratives" (a form of enactment of knowledge) and trace the origins of the notation system so that the learner will have a better sense of how it was developed to solve a problem (Chapter 7).

In all these acts of teaching "creatively," the pedagogical elements of enactment, critical thinking, and imaginative play are present. It is even more distinct when applied science is concerned, such as forensic psychology, which involves critical decision making

about a person's state of mind in suspected criminal actions (Chapter 8). It is no wonder that fieldwork and case methods are dominant modes of learning to help students act, feel, and think like forensic psychologists.

Critics of constructivism sometimes complain that advocates of constructivist learning confuse *pedagogy* (how one teaches a subject) with *epistemology* (how experts approach and get to know something; Kirschner, 2009). Although the distinction is well taken, the separation is not inevitable. If enactment, critical thinking, and imaginative play are important as regular exercises of professionals in a domain, then they are also important for learning that "game." In this sense, the epistemology of a domain or subject matter can inform pedagogy so that learning becomes generative and transfer more likely (see Shaffer, 2004). So does creativity.

Pedagogical Tools and Strategies

The process of teaching for creativity is not as straightforward, of course. How to turn abstract, sometimes esoteric, concept systems into concrete, lived experiences takes some creative pedagogical renditions and transformations in their own right. Infusing arts into major school subjects is one such kind of pedagogical innovation. The Art in Action project pairing "teaching artists" with classroom teachers is an interesting experiment reported in Chapter 3. The account provided in the chapter is fascinating, though more detailed renditions of "art in action" in specific school subjects could entail another chapter or even a book.

The elements of enactment, critical thinking, and imaginative play are clearly present in the games students created for their "Serious Education Game" design projects (Chapter 4). The way the whole project is orchestrated warrants careful scrutiny in terms of affordances and constraints vis-à-vis students' knowledge, motivation, and self-regulation.

Several chapters directly deal with pedagogical "tricks" that encourage personalization of learning such as providing choice; using humor, metaphors, and personalization (Chapter 9); capitalizing on unexpected answers by students as an opportunity for creative learning (Chapter 10); and using personal stories, critical incidents, and "playback theater" (Chapter 11). In this sense, teaching for creativity, indeed, takes "creative teaching" in the sense that it takes into account agencies and constraints of the learner and learning.

Framed this way, the question of domain specificity and domain generality of creativity raised in Chapter 13 can also be addressed. Knowledge construction through enactment, critical thinking, and imaginative play is always domain specific (even in an interdisciplinary sense), be it science, music, or psychology. However, the way that the

learner renders such construction personally can always induce a range of applications, depending on the learner's scope of knowledge, personal dispositions, and versatility.

Thus, the personal transformation of domain knowledge makes a radical domain-specific view of creativity untenable and limiting (see also Chapter 14). Also, from this perspective, one cannot expect uniform effects of creative teaching on creative learning, as individual differences in personal creativity will manifest themselves. Some may become creative with near transfer (bounded by domains), and others are capable of far transfer and deep transformation (transcending domain boundaries).

How Do We Know It Works?

Ultimately, only what gets transpired in action bears out the effectiveness of creative teaching and the degree of the impact it has on student creativity. Potentially, evidence can be accrued from both the process and product of enactment, critical thinking, and imaginative play. Several contributors discuss the assessment and evaluation component of their respective projects.

However, it is not clear whether the evaluation criteria used match what their projects were meant to produce. Sometimes academic achievement was used as a main criterion (e.g., Chapter 3). It can be argued that validity may be at issue when what are meant as outcomes may not fit the standard achievement criteria and may not show in standardized tests. Chapter 12 discusses various assessment strategies that are tailored to the purpose of encouraging and evaluating creativity in terms of process and product. It focuses on how "creative assignments" can be integrated into classroom teaching in multiple ways. It seems that both formal and informal ways of assessment can be used to generate cumulative evidence for the effectiveness of creative teaching.

Conclusion

I began this review with a hypothesis proposed by Simonton in Chapter 14 that creative teaching makes students more creative, and I elaborated on this theme by sampling chapter contents throughout the volume. My review by and large supports the connection between creative teaching and creative learning. As the title of this book indicates, the editors divided the chapters into two main topics: "teaching creatively" and "teaching [for] creativity."

If my conjecture is right, then this division is of convenience, rather than of necessity. Indeed, chapters on "teaching creatively" often dwell on encouraging student creativity by making learning active, critical, and generative, and chapters on "teaching creativity" often involve discussion of teaching (and assessing) creatively. My review here provides only an

affirmative note to Simonton's concluding chapter that, indeed, his proposal is viable and that, indeed, this line of research is worthy of pursuing.

References

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