

Educational Consequences of Creativity: A Creative Learning Perspective^{1, 2}

Ronald A. Beghetto

The University of Connecticut, USA

E-mail address: Ronald.Beghetto@uconn.edu

Maciej Karwowski

University of Wroclaw, Poland

E-mail address: maciej.karwowski@uwr.edu.pl

ARTICLE INFO

Keywords:

Creativity
Learning
Creative Learning
Education

Article history:

Received 19 November 2018

Received in revised form 30 November 2018

Accepted 15 December 2018

ISSN: 2354-0036

DOI: 10.1515/ctra-2018-0011

ABSTRACT

How can creativity be encouraged in schools and what are the educational consequences of doing so? We address this question from a creative learning perspective. Specifically, we open by discussing how this question can be approached from at least two different perspectives: one that positions creativity and academic learning as competing goals and another that conceptualizes these goals as compatible. We discuss how a creative learning perspective helps to reframe this question and clarify the educational consequences of doing so. We close by briefly outlining five considerations for promoting favorable outcomes with respect to encouraging creativity in schools and classrooms.

Much has been made of the idea that schools suppress or even kill creativity. Long before the incredibly popular and provocative TED talk by Sir Ken Robinson, “Do schools kill creativity?” creativity scholars raised concerns about the potential for schools to systematically suppress creative expression (Cropley, 2010; Torrance, 1970; Weininger, 1977). Such claims, some of which have been bolstered by empirical support (Scott, 1999; Torrance, 1959; Westby & Dawson, 1995), are not surprising given that the typical design of schools tend to privilege sameness (Glăveanu & Beghetto, 2017). Creativity on the other hand requires difference. In fact, one way to define creativity in a school context is simply: different or unexpected ways of meeting pre-established curricular goals or criteria (Beghetto, in press).

Perhaps the question is not whether schools tend to suppress creativity, but rather: *How can creativity be encouraged in schools and what are the educational consequences of doing so?* The aim of this commentary is to start exploring this question.

¹ Janina Uszynska-Jarmoc served as an action editor for this article.

² Maciej Karwowski was supported by the funding received from the National Science Centre (UMO-2016/22/E/HS6/00118).

Specifically, we endeavor to address this question from a creative learning perspective and aim to highlight both the potential benefits and drawbacks of more systematically encouraging creativity in the context of academic learning. We open by exploring the question of why creativity should be encouraged in schools and highlight some core assumptions that serve as the basis for such a question. Next, we explain how a creative learning perspective helps to reframe this question and clarify the educational consequences. Finally, we close by briefly outlining considerations for promoting favorable outcomes.

How Can Creativity be Encouraged in Schools?

The question of how creativity can be encouraged in schools can be approached in at least two ways. One way assumes that creativity and learning are separate or competing phenomena. Such a view represents an “either/or” distinction that requires educators to make the decision to focus on *either* supporting student creativity at the expense of learning *or* supporting learning at the expense of nurturing creativity (Beghetto, 2013). Proponents of creativity find themselves enumerating lists of why creativity *should* be encouraged and engaging in the zero-sum calculations of what might be replaced in order for creativity to be present.

Given that schools are explicitly designed to promote academic learning, efforts aimed at expending resources on something viewed as different or incompatible with this primary goal of schools likely will be viewed as extra-curricular and given little or no resources or systematic attention (Aljughaiman & Mowrer-Reynolds, 2005; Cotter, Pretz, & Kaufman, 2016). Consequently, people who value creativity and hold this perspective may find themselves attempting to make the somewhat futile case that nurturing creativity in schools is as (or even more) important than supporting academic learning.

An alternative way of approaching this question is to recognize that there is a great deal of overlap in theoretical conceptualizations of creativity and learning. As discussed elsewhere (Gajda, Karwowski, & Beghetto, 2017), both creativity and academic learning involve change. Both represent processes and products. And both have emergent and idiosyncratic features. This “both/and” view posits that creativity and learning are compatible, mutually dependent, and capable of coexisting in schools and classrooms (Beghetto, 2013).

Empirically speaking, researchers have found that indicators of creativity and academic learning tend to be positively related, less so when measured with more general and aggregate measures (e.g., $r = .22$, e.g., Gajda, Karwowski, et al., 2017) and more so when measured with more task and content specific measures (e.g., $r = .38$, math;

$r = .31$, language, Karwowski et al., in press). Moreover, this relationship becomes more and less pronounced at different levels of creative and academic achievement (Karwowski et al., in press), which suggests that the pattern of relationships between creativity and learning is rather nuanced and dynamic.

Creativity researchers who hold an interdependent perspective also recognize that just because schools have been designed to privilege sameness, does not mean that the learning that occurs in those settings precludes creativity (Glăveanu & Beghetto, 2017; Karwowski, 2018). In fact, scholars who endorse an interdependent perspective have long recognized that creativity and learning are mutually dependent (e.g., Guilford, 1950; Vygotsky, 2004). This mutual dependence is perhaps best represented in a creative learning perspective, which outlines how creativity and academic learning can mutually reinforce each other.

A Creative Learning Perspective

Creativity researchers have used the term *creative learning* in a variety of ways to highlight or focus on some aspect of the relationship between creativity and learning (e.g., Guilford, 1967; Sefton-Green, Thomson, Jones, & Bresler, 2011; Treffinger, 1980; Wyse & Spendlove, 2007). The creative learning perspective we focus on herein endeavors to clarify the role that creativity plays in academic learning and how creative expression can contribute to the academic learning of others (for a detailed treatment of the assumptions of this perspective see Beghetto, 2016; Beghetto & Schuh, in press).

A brief discussion of the core features of this perspective can illustrate how it provides a different way of thinking about creativity and its consequences in educational settings. Specifically, this conception of creative learning posits a socio-individual account of creative learning, which is situated in particular academic contexts.

At the individual level, this perspective describes how academic stimuli can trigger a combinatorial, cognitive process in students, which involves blending new learning stimuli with students pre-existing knowledge and learning experiences (Beghetto & Schuh, in press); which, in turn, can result in new and personally meaningful understanding of academic subject matter. This account of “creativity-in-learning” aligns with a long tradition of the subjective accounts of creativity (e.g., Beghetto & Kaufman, 2007; Guilford, 1950; Runco, 2003, 2004; Stein, 1953).

Moreover, this perspective on creative learning reframes the question of how creativity can be encouraged in schools by asserting that creativity *is always and already en-*

couraged in school anytime students have new and personally meaningful learning experiences. Of course, just because a student has a new and personally meaningful understanding, doesn't mean that the student's understanding is compatible with how others (teachers, subject matter experts) understand that academic content (Beghetto, 2016)

Consequently, in the context of academic learning, students also need an opportunity to test out their idiosyncratic conceptions and receive corrective feedback. Doing so moves personally creative conceptions into the social (or intersubjective) sphere, which in some cases can result in creative contributions to the learning of others (Gajda, Beghetto, & Karwowski, 2017). Specifically, if a student's unique and academically compatible conception helps others (peers or even the teacher) understand the subject matter in a new or different way, then the student has made a creative contribution to others.

This account of "learning-in-creativity" aligns with how creativity researchers have described the role that social recognition plays in judging creative contributions (e.g., at little-c or larger levels, see Kaufman & Beghetto, 2009; Runco & Beghetto, 2019). In classrooms where students are expected to share their unique conceptions of what they are learning, and those conceptions are seriously considered and engaged with by teachers and peers, then the potential for students to make creative contributions to the academic learning of others is possible.

In a sense, then, learning-in-creativity requires a classroom climate that is conducive to encouraging students to develop and test-out share their unique perspectives and insights. Importantly, such a classroom climate is not necessarily stable or fixed, but rather is dynamic and changes across time and particular interactional situations (see Gajda, Beghetto, et al., 2017; Karwowski, 2019).

The educational consequences of creativity from a creative learning perspective are therefore twofold: new and personally meaningful understanding of academic subject matter (at the individual level) *and* the potential to contribute to the learning of others (at the social level). Importantly, these twin components of creative learning do not require some special creativity techniques or tricks, rather they already occur in schools and classrooms (even though they are not always explicitly recognized). That said, there are a few considerations that can help ensure that creative learning is more systematic, recognized, and beneficial. We close by briefly outlining five of these considerations.

Considerations for Promoting Favorable Consequences of Creative Learning

- **Clarify the relationship between creativity and learning.** Understanding how creativity and learning relate to each other will help ensure that these phenomena are recognized as complimentary and mutually dependent, rather than competing and independent goals in schools and classrooms.
- **Differentiate between academic and non-academic creative expression.** When considering how creativity might be supported in education and the consequences of doing so, it is important to differentiate between academic and non-academic creative expression. Indeed, non-academic creative endeavors likely will be viewed as being in competition for finite school and classroom resources, whereas creative expression that occurs in the context of academic learning may be more likely to be viewed as a beneficial and complimentary goal.
- **Instructional practices supportive of creative learning.** Instructional practices, which explicitly recognize and attempt to examine the potential value of idiosyncratic differences in how students' make sense of academic subject matter can help students develop a deeper understanding and potentially contribute to the learning of others. Conversely, instructional practices that require students to conform to a singular way of meeting of academic learning goals likely will suppress students' and teachers' willingness see the value in different (i.e., creative) ways of meeting learning goals (Beghetto, in press; Gajda, Beghetto, et al., 2017).
- **View creative learning as dynamic, agentic action.** Both creativity and learning are driven by a wide range of inter-related self-beliefs, including creative self-concept, self-efficacy and creative mindsets (see Karwowski, Lebuda, & Beghetto, 2019). These beliefs have been posited as playing key regulatory roles in creative thought and action. Indeed, unless students and teachers see the value in and believe that they are capable of making creative contributions to the learning of others, then it is unlikely they will put forth the effort necessary to do so (Bandura, 1997; Karwowski & Beghetto, 2018; Wigfield & Eccles, 2000).
- **Use blended and dynamic methods and measures when studying creative learning.** When studying creative learning it is important for researchers to use and develop more dynamic, blended and situationally sensitive methods and measures (Beghetto & Corazza, in press; Gajda, Beghetto, et al., 2017; Karwowski, Han, & Beghetto, in press; Karwowski, et al., in press). Such approaches are not only im-

portant for understanding creative learning, but generalize to creativity science as a whole. In recent years, creativity researchers have recognized this and started using a variety of more sensitive and dynamic techniques, including: ecological momentary assessment (Czerwonka, 2019; Karwowski, Lebuda, Szumski, & Firkowska-Mankiewicz, 2017; Silvia et al., 2014), passive automatized measurement (D'Mello, Dieterle, & Duckworth, 2017), rigorous observational studies (Gajda, Beghetto, et al., 2017; Katz-Buonincontro & Anderson, 2018), and blended approaches that link solid cognitive measures with a look into individuals' strategies, while dealing with creative tasks (Jankowska, Czerwonka, Lebuda, & Karwowski, 2018; Loesche, Goslin, & Bugmann, 2018).

REFERENCES

- Aljughaiman, A., & Mowrer-Reynolds, E. (2005). Teachers' conceptions of creativity and creative students. *Journal of Creative Behavior*, 39, 17-34.
- Beghetto, R. A. (2013). *Killing ideas softly? The promise and perils of creativity in the classroom*. Charlotte, NC: Information Age Publishing.
- Beghetto, R. A. (2016). Creative learning: A fresh look. *Journal of Cognitive Education and Psychology*, 15, 6-23.
- Beghetto, R. A., & Corazza, G. E. (Eds.). (in press). *Dynamic perspectives on creativity: New directions for theory, research, and practice*. Cham: Springer International Publishing.
- Beghetto, R. A., & Kaufman, J. C. (2007). Toward a broader conception of creativity: A case for "mini-c" creativity. *Psychology of Aesthetics, Creativity, and the Arts*, 1, 73-79.
- Beghetto, R. A., & Schuh, K. (in press). Exploring the link between imagination and creativity: A creative learning perspective. In D. D. Preiss, D. Cosmelli, & J. C. Kaufman (Eds.), *Mind wandering and creativity*. San Diego, CA: Academic Press.
- Cotter, K. N., Pretz, J. E., & Kaufman, J. C. (2016). Applicant extracurricular involvement predicts creativity better than traditional admissions factors. *Psychology of Aesthetics, Creativity, and the Arts*, 10, 2-13.
- Cropley, A. J. (2010). Creativity in the classroom: The dark side. In D. H. Cropley, Cropley, A. J., J. C. Kaufman, & M. A. Runco (Eds.), *The dark side of creativity*. New York: Cambridge University Press.

- Czerwonka, M. (2019). Those days when people are creative: diary methods in creativity research. In Izabela Lebuda & V. P. Glăveanu (Eds.), *The Palgrave Handbook of Social Creativity Research* (pp. 59-73). Cham: Palgrave Macmillan.
- D'Mello, S., Dieterle, E., & Duckworth, A. (2017). Advanced, analytic, automated (AAA) measurement of engagement during learning. *Educational Psychologist*, 52, 104-123.
- Gajda, A., Beghetto, R. A., & Karwowski, M. (2017). Exploring creative learning in the classroom: A multi-method approach. *Thinking Skills and Creativity*, 24, 250-267.
- Gajda, A., Karwowski, M., & Beghetto, R. A. (2017). Creativity and academic achievement: A meta-analysis. *Journal of Educational Psychology*, 109, 269-299.
- Glăveanu, V. P., & Beghetto, R. A. (2017). The difference that makes a 'creative' difference in education. In R. A. Beghetto & B. Sriraman (Eds.), *Creative Contradictions in Education: Cross Disciplinary Paradoxes and Perspectives* (pp. 37-54). Cham: Springer International Publishing.
- Guilford, J. P. (1950). Creativity. *American Psychologist*, 14, 469-479.
- Guilford, J. P. (1967). Creativity and learning. In D. B. Lindsley & A. A. Lumsdaine (Eds.), *Brain function, Vol. IV: Brain function and learning*. Los Angeles: University of California Press.
- Jankowska, D. M., Czerwonka, M., Lebuda, I., & Karwowski, M. (2018). Exploring the creative process: Integrating psychometric and eye-tracking approaches. *Frontiers in Psychology*, 9.
- Karwowski, M. (2018). The flow of learning. *Europe's Journal of Psychology*, 14, 291-295.
- Karwowski, M. (2019). Classroom creative climate: From a static to a dynamic perspective. In I. Lebuda & V. P. Glăveanu (Eds.), *The Palgrave handbook of social creativity research* (pp. 487-499). Cham: Palgrave Macmillan.
- Karwowski, M., Han, M.-H., & Beghetto, R. A. (in press). Toward dynamizing the measurement of creative confidence beliefs. *Psychology of Aesthetics, Creativity, and the Arts*.
- Karwowski, M., Jankowska, D. M., Brzeski, A., Czerwonka, M., Gajda, A., Lebuda, I., & Beghetto, R. A. (in press). Delving into creative learning. *Creativity Research Journal*.
- Karwowski, M., Lebuda, I., & Beghetto, R. A. (2019). Creative self-beliefs. In J. C. Kaufman & R. J. Sternberg (Eds.), *The Cambridge handbook of creativity (2nd. edition)*. New York: Cambridge University Press.

- Karwowski, M., Lebuda, I., Szumski, G., & Firkowska-Mankiewicz. (2017). From moment-to-moment to day-to-day: Experience sampling and diary investigations in adults' everyday creativity. *Psychology of Aesthetics, Creativity, and the Arts*, 11, 309-324.
- Katz-Buonincontro, J., & Anderson, R. C. (2018). A review of articles using observation methods to study creativity in education (1980–2018). *Journal of Creative Behavior*.
- Kaufman, James C., & Beghetto, R. A. (2009). Beyond big and little: The four c model of creativity. *Review of General Psychology*, 13, 1-12.
- Loesche, F., Goslin, J., & Bugmann, G. (2018). Paving the way to eureka-Introducing “Dira” as an experimental paradigm to observe the process of creative problem solving. *Frontiers in Psychology*, 9.
- Runco, M. A. (2003). Education for creative potential. *Scandinavian Journal of Educational Research*, 47, 317-324.
- Runco, M. A. (2004). Everyone has creative potential. In R. J. Sternberg, E. L. Grigorenko, & J. L. Singer (Eds.), *Creativity: From potential to realization* (pp. 21-31). Washington, DC: American Psychological Association.
- Runco, M. A., & Beghetto, R. A. (2019). Primary and secondary creativity. *Current Opinion in Behavioral Sciences*, 27, 7-10.
- Scott, C. L. (1999). Teachers' biases toward creative children. *Creativity Research Journal*, 12, 321-328.
- Sefton-Green, J., Thomson, P., Jones, K., & Bresler, L. (Eds.). (2011). *The Routledge international handbook of creative learning*. London, UK: Routledge.
- Silvia, P. J., Beaty, R. E., Nusbaum, E. C., Eddington, K. M., Levin-Aspensson, H., & Kwapil, T. R. (2014). Everyday creativity in daily life: An experience-sampling study of “little c” creativity. *Psychology of Aesthetics, Creativity, and the Arts*, 8, 183-188.
- Stein, M. (1953). Creativity and culture. *Journal of Psychology*, 36, 311-322.
- Torrance, E. Paul. (1970). Achieving socialization without sacrificing creativity. *Journal of Creative Behavior*, 4, 183-189.
- Torrance, E.P. (1959). Current research on the nature of creative talent. *Journal of Counseling Psychology*, 6, 309-316.
- Treffinger, D. J. (1980). *Encouraging creative learning for the gifted and talented*. Ventura, CA: Leadership Training Institute.
- Vygotsky, L. S. (2004). Imagination and creativity in childhood. (Trans. M. E. Sharpe, Inc.). *Journal of Russian and East European Psychology*, 42, 7-97 (Original work published 1967).

- Weininger, O. (1977). Some thoughts on creativity and the classroom. *Journal of Creative Behavior*, 11, 109-118.
- Westby, E. L., & Dawson, V. L. (1995). Creativity: Asset or burden in the classroom? *Creativity Research Journal*, 8, 1-10.
- Wyse, D., & Spendlove, D. (2007). Partners in creativity: action research and creative partnerships. *Education 3-13*, 35, 18-191.

Corresponding author at: Ronald A. Beghetto, Department of Educational Psychology, Neag School of Education, University of Connecticut, 2131 Hillside Road Storrs, CT 06269-3007.
E-mail: Ronald.Beghetto@uconn.edu

Corresponding author at: Maciej Karwowski Institute of Psychology, University of Wrocław, ul. Dawida 1, 50-527, Wrocław, Poland
E-mail: maciej.karwowski@uwr.edu.pl

