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Creative Learning in Education

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Although schools and classrooms have sometimes been characterized as contexts that suppress or even kill student creativity (Robinson, 2006), educational settings hold much promise for supporting students' creative learning. Prior research has, for instance, indicated that there is on an average positive relationship ($r = .22$) between measures of creativity and academic achievement (Gajda, Karwowski, & Beghetto, 2016). This association tends to grow when measures are more fine-tuned to assess creativity and academic learning in specific subject areas (Karwowski et al., 2020). These findings suggest that under the right conditions, creativity and learning can be complementary.

Indeed, creativity researchers have long asserted that creativity and learning are tightly coupled phenomena (Guilford, 1950, 1967; Sawyer, 2012). Moreover, recent theoretical and empirical work has helped to clarify the construct and process of *creative learning* (Beghetto, 2020; Beghetto & Schuh, 2020; Gajda, Beghetto, & Karwowski, 2017). Creative learning in schools represents a specific form of learning that involves creative expression in the context of academic learning. More specifically, creative learning involves a "combination of intrapsychological and interpsychological processes that result in new and personally meaningful understandings for oneself and others" (Beghetto, p. 9).

Within the context of schools and classrooms, the process of creative learning can range from smaller scale contributions to one's own and others'

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learning (e.g., a student sharing a unique way of thinking about a math problem) to larger scale and lasting contributions that benefit the learning and lives of people in and beyond the walls of the classroom (e.g., a group of students develop and implement a creative solution for addressing social isolation in the lunchroom). In this way, efforts aimed at supporting creative learning represents a generative form of positive education because it serves as a vehicle for students to contribute to their own and others learning, life, and wellbeing (White & Kern, 2018). The question then is not whether creative learning can occur in schools, but rather what are the key factors that seem to support creative learning in schools and classrooms? The purpose of this chapter is to address this question.

What's Creative About Creative Learning?

Prior to exploring how creative learning can be supported in schools and classrooms, it is important to first address the question of what is creative about creative learning? *Creative learning* pertains to the development of new and meaningful contributions to one's own and others' learning and lives. This conception of creative learning adheres to standard definitions of creativity (Plucker, Beghetto, & Dow, 2004; Runco & Jaeger, 2012), which includes two basic criteria: it must be *original* (new, different, or unique) as defined within a particular context or situation, and it must be *useful* (meaningful, effectively meets task constraints, or adequately solves the problem at hand). In this way, creativity represents a form of constrained originality. This is particularly good news for educators, as supporting creative learning is not about removing all constraints, but rather it is about supporting students in coming up with new and different ways of meeting academic criteria and learning goals (Beghetto, 2019a, 2019b).

For example, consider a student taking a biology exam. One question on the exam asks students to draw a plant cell and label its most important parts. If the student responds by drawing a picture of a flower behind the bars of a jail cell and labels the iron bars, lack of windows, and incarcerated plant,¹ then it could be said that the student has offered an original or even humorous response, but not a creative one. In order for a response to be considered creative, it needs to be both original and meaningfully meet the task constraints. If the goal was to provide a funny response to the prompt, then perhaps it could be considered a creative response. But in this case, the

¹ This example is based on a popular internet meme of a humorous drawing in response to this question.

task requires students to meet the task constraints by providing a scientifically accurate depiction of a plant cell. Learning tasks such as this offer little room for creative expression, because the goal is often to determine whether students can accurately reproduce what has been taught.

Conversely, consider a biology teacher who invites students to identify their own scientific question or problem, which is unique and interesting to them. The teacher then asks them to design an inquiry-based project aimed at addressing the question or problem. Next, the teacher invites students to share their questions and project designs with each other. Although some of the questions students identify may have existing answers in the scientific literature, this type of task provides the openings necessary for creative learning to occur in the classroom. This is because students have an opportunity to identify their own questions to address, develop their own understanding of new and different ways of addressing those questions, *and* share and receive feedback on their unique ideas and insights. Providing students with semi-structured learning experiences that requires them to meet learning goals in new and different ways helps to ensure that students are developing personally and academically meaningful understandings and also provides them with an opportunity to potentially contribute to the understanding of their peers and teachers (see Ball, 1993; Beghetto, 2018b; Gajda et al., 2017; Niu & Zhou, 2017 for additional examples).

Creative learning can also extend beyond the walls of the classroom. When students have the opportunity and support to identify their own problems to solve and their own ways of solving them, they can make positive and lasting contributions in their schools, communities, and beyond. Legacy projects represent an example of such efforts. Legacy projects refer to creative learning endeavours that provide students with opportunities to engage with uncertainty and attempt to develop sustainable solutions to complex and ill-defined problems (Beghetto, 2017c, 2018b). Such projects involve a blend between learning and creative expression with the aim of making a creative contribution. A group of fourth graders who learned about an endangered freshwater shrimp and then worked to restore the habitat by launching a project that spanned across multiple years and multiple networks of teachers, students, and external partners is an example of a legacy project (see Stone & Barlow, 2010).

As these examples illustrate, supporting creative learning is not simply about encouraging original student expression, but rather involves providing openings for students to meet academic learning constraints in new and different ways, which can benefit their own, their peers', and even their teachers' learning. Creative learning can also extend beyond the classroom

and enable students to make a lasting and positive contribution to schools, communities, and beyond. In this way, the process of creative learning includes both intra-psychological (individual) and inter-psychological (social) aspects (Beghetto, 2016).

At the individual level, creative learning occurs when students encounter and engage with novel learning stimuli (e.g., a new concept, a new skill, a new idea, an ill-defined problem) and attempt to make sense of it in light of their own prior understanding (Beghetto & Schuh, 2020). Creative learning at the individual level involves a creative combinatorial process (Rothenberg, 2015), whereby new and personally meaningful understanding results from blending what is previously known with newly encountered learning stimuli. Creativity researchers have described this form of creativity as *personal* (Runco, 1996), *subjective* (Stein, 1953), or *mini-c* creativity² (Beghetto & Kaufman, 2007). This view of knowledge development also aligns with how some constructivist and cognitive learning theorists have conceptualized the process of learning (e.g., Alexander, Schallert, & Reynolds, 2009; Piaget, 1973; Schuh, 2017; Von Glasersfeld, 2013).

If students are able to develop a new and personally meaningful understanding, then it can be said that they have engaged in creative learning at the individual level. Of course, not all encounters with learning stimuli will result in creative learning. If learning stimuli are too discrepant or difficult, then students likely will not be able to make sense of the stimuli. Also, if students are able to accurately reproduce concepts or solve challenging tasks or problems using memorized algorithms (Beghetto & Plucker, 2006) without developing personally meaningful understanding of those concepts or algorithms, then they can be said to have successfully memorized concepts and techniques, but not to have engaged in creative learning. Similarly, if a student has already developed an understanding of some concept or idea and encounters it again, then they will be reinforcing their understanding, rather than developing a new or understanding (Von Glasersfeld, 2013). Consequently, in order for creative learning to occur at the individual level, students need to encounter optimally novel learning experiences and stimuli, such that they can make sense of those stimuli in light of their own prior learning trajectories (Beghetto & Schuh, in press; Schuh, 2017).

² Creativity researchers recognize that there are different levels of creative magnitude (Kaufman & Beghetto, 2009), which ranges from subjectively experienced creativity (*mini-c*) to externally recognized creativity at the everyday or classroom level (*little-c*), the professional or expert level (*Pro-c*), and even legendary contributions that stand the test of time (*Big-C*).

Creative learning can also extend beyond individual knowledge development. At the inter-psychological (or social) level, students have an opportunity to share and refine their conceptions with teachers and peers, making a creative contribution to the learning and lives of others (Beghetto, 2016). For instance, as apparent in the legacy projects, it is possible for students to make creative contributions beyond the walls of the classroom, which occasionally can be recognized by experts as a significant contribution. Student inventors, authors, content creators, and members of community-based problem solving teams are further examples of the inter-psychological level of creative contribution.

In sum, creative learning is a form of creative expression, which is constrained by an academic focus. It is also a special case of academic learning, because it focuses on going beyond reproductive and reinforcement learning and includes the key creative characteristics (Beghetto, 2020; Rothenberg, 2015; Sawyer, 2012) of being both *combinatorial* (combining existing knowledge with new learning stimuli) and *emergent* (contributing new and sometimes surprising ideas, insights, perspectives, and understandings to oneself and others).

Locating Creative Learning in Schools and Classrooms

Having now explored the question of what makes creative learning creative, we can now turn our attention to locating the factors and conditions that can help support creative learning in schools and classrooms. As illustrated in Fig. 19.1, there are at least four interrelated components posited as being necessary for creative learning to occur in schools, classrooms, and beyond: students, teachers, academic subject matter, and uncertainty. Creative learning in schools and classrooms occurs at the intersection of these four factors. Further, the classroom, school, and broader sociocultural contexts play an important role in determining whether and how creative learning will be supported and expressed. Each of these factors will be discussed in the sections that follow.

The Role of Students in Creative Learning

Students, of course, play a central role in creative learning. At the individual level, students' idiosyncratic learning histories will influence the kinds of creative insights, ideas, and interpretations they have when engaging with

Fig. 19.1 Factors involved in creative learning in schools, classrooms, and beyond

new learning stimuli (Beghetto & Schuh, 2020; Schuh, 2017). Although a case can be made that subjective and personally meaningful creative insights and experiences are sufficient ends in themselves (Beghetto & Kaufman, 2007; Runco, 1996; Stein, 1953), creative learning tends to be situated in well-developed subject areas. Moreover, the goals of most formal educational activities, such as those that occur in schools and classrooms, include making sure that students have developed an accurate or at least a compatible understanding of existing concepts, ideas, and skills (Von Glasersfeld, 2003). Consequently, creative learning in schools—even at the individual level—involves providing students with opportunities to test out and receive feedback on their personal understandings and insights to ensure that what they have learned fits within the broader academic subject area. When this occurs, creative learning at the individual level represents a blend of idiosyncratic and generally agreed upon academic knowledge.

Notably, the idiosyncratic portion of this blend is not merely surplus ideas or insights, but rather has the potential to creatively contribute to the learning and understanding of others. Indeed, the full expression of creative learning extends beyond the individual and also has the opportunity to contribute to the learning and lives of others. At both the individual and social level of

creative learning, students' need to be willing to share, test, and receive feedback on their conceptions, otherwise the full expression of creative learning will be short-circuited. Thus, an important question, at the student level, is what factors might influence students' willingness to share their ideas with others?

Creativity researchers have identified at least three interrelated student factors that seem to play a role in determining students' willingness to share their conceptions with others: *creative confidence*, *valuing creativity*, and *intellectual risk-taking*. Creative confidence beliefs refer to a somewhat broad category of creative self-beliefs that pertain to one's confidence in the ability to think and act creatively (Beghetto & Karwowski, 2017). Creative confidence beliefs can range from more situationally and domain-specific beliefs (e.g., I am confident I can creatively solve this particular problem in this particular situation) to more general and global confidence beliefs (e.g., I am confident in my creative ability). Much like other confidence beliefs (Bandura, 2012), creative confidence beliefs are likely influenced by a variety of personal (e.g., physiological state), social (e.g., who is present, whether people are being supportive), and situational (e.g., specific nature of the task, including constraints like time and materials) factors. Recent research has indicated that creative confidence beliefs mediate the link between creative potential and creative behaviour (Beghetto, Karwowski, Reiter-Palmon, 2020; Karwowski & Beghetto, 2019).

In the context of creative learning, this line of work suggests that students need to be confident in their own ideas prior to being willing to share those ideas with others and test out their mini-c ideas. However, valuing creativity and the willingness to take creative risks also appear to play key roles. Valuing creativity refers to whether students view creativity as an important part of their identity and whether they view creative thought and activity as worthwhile endeavours (Karwowski, Lebuda, & Beghetto, 2019). Research has indicated that valuing creativity moderates the mediational relationship between creative confidence and creative behaviour (Karwowski & Beghetto, 2019).

The same can be said for intellectual risk-taking, which refers to adaptive behaviours that puts a person at risk of making mistakes or failing (Beghetto, 2009). Findings from a recent study (Beghetto, Karwowski, Reiter-Palmon, 2020) indicate that intellectual risk-taking plays a moderating role between creative confidence and creative behaviour. In this way, even if a student has confidence in their ideas, unless they identify with and view such ideas as worthwhile and are willing to take the risks of sharing those ideas with others,

then they are not likely to make a creative contribution to their own and others learning.

Finally, even if students have confidence, value creativity, and are willing to take creative risks, unless they have the opportunities and social supports to do so then they will not be able to realize their creative learning potential. As such, teachers, peers, and others in the social classroom, school, and broader environments are important for bringing such potential to fruition.

The Role of Teachers in Creative Learning

Teachers play a central role in designing and managing the kinds of learning experiences that determine whether creativity will be supported or suppressed in the classroom. Indeed, unless teachers *believe that they can* support student creativity, *have some idea of how* to do so, and *are willing* to try then it is unlikely that students will have systematic opportunities to engage in creative learning (Beghetto, 2017b; Davies et al., 2013; Gralewski & Karawoski, 2018; Paek & Sumners, 2019). Each of these teacher roles will be discussed in turn.

First, teachers need to believe that they can support student creativity in their classroom. This has less to do with whether or not they value student creativity, as previous research indicates most generally do value creativity, and more about whether teachers have the autonomy, curricular time, and knowledge of how to support student creativity (Mullet, Willerson, Lamb, & Kettler, 2016). In many schools and classrooms, the primary aim of education is to support students' academic learning. If teachers view creativity as being in competition or incompatible with that goal, then they will understandably feel that they should focus their curricular time on meeting academic learning goals, even if they otherwise value and would like to support students' creative potential (Beghetto, 2013). Thus, an important first step in supporting the development of students' creative potential is for teachers to recognize that supporting creative and academic learning can be compatible goals. When teachers recognize that they can simultaneously support creative and academic learning then they are in a better position to more productively plan for and respond to opportunities for students' creative expression in their everyday lessons.

Equipped with this recognition, the next step in supporting student creativity is for teachers to develop the knowledge and skills necessary for infusing creativity into their curriculum (Renzulli, 2017) so that they can teach *for* creativity. Teaching for creativity in the K-12 classroom differs from other forms of creativity teaching (e.g., teaching about creativity, teaching

with creativity) because it focuses on nurturing student creativity in the context of specific academic subject areas (Beghetto, 2017b; Jeffrey & Craft, 2004). This form of creative teaching thereby requires that teachers have an understanding of *pedagogical creativity enhancement knowledge* (PCeK), which refers to knowing how to design creative learning experiences that support and cultivate students' adapted creative attitudes, beliefs, thoughts, and actions in the planning and teaching of subject matter (Beghetto, 2017a). Teaching for creativity thereby involves designing lessons that provide creative openings and expectations for students to creatively meet learning goals and academic learning criteria. As discussed, this includes requiring students to come up with their own problems to solve, their own ways of solving them, and their own way of demonstrating their understanding of key concepts and skills. Teaching for creativity also includes providing students with honest and supportive feedback to ensure that students are connecting their developing and unique understanding to existing conventions, norms, and ways of knowing in and across various academic domains.

Finally, teachers need to be willing to take the instructional risks necessary to establish and pursue openings in their planned lessons. This is often easier said than done. Indeed, even teachers who otherwise value creativity may worry that establishing openings in their curriculum that require them to pursue unexpected student ideas will result in the lesson drifting too far off-track and into curricular chaos (Kennedy, 2005). Indeed, prior research has demonstrated that it is sometimes difficult for teachers to make on-the-fly shifts in their lessons, even when the lesson is not going well (Clark & Yinger, 1977). One way that teachers can start opening up their curriculum is to do so in small ways, starting with the way they plan lessons. Lesson unplanning—the process of creating openings in the lesson by replacing predetermined features with to-be-determined aspects (Beghetto, 2017d)—is an example of a small-step approach. A math teacher who asks students to solve a problem in as many ways as they can represent a simple, yet potentially generative form of lesson unplanning. By starting small, teachers can gradually develop their confidence and willingness to establish openings for creative learning in their curriculum while still providing a supportive and structured learning environment. Such small, incremental steps can lead to larger transformations in practice (Amabile & Kramer, 2011) and reinforce teachers' confidence in their ability to support creative learning in their classroom.

The Role of Academic Subject Matter in Creative Learning

Recall that creativity requires a blend of originality and meaningfully meeting criteria or task constraints. If students' own unique perspectives and interpretations represent the *originality* component of creativity, then existing academic criteria and domains of knowledge represent the *criteria and tasks constraints*. Creativity always operates within constraints (Beghetto, 2019a; Stokes, 2010). In the context of creative learning, those constraints typically represent academic learning goals and criteria. Given that most educators already know how to specify learning goals and criteria, they are already half-way to supporting creative learning. The other half requires considering how academic subject matter might be blended with activities that provide students with opportunities to meet those goals and criteria in their own unique and different ways. In most cases, academic learning activities can be thought of as having four components (Beghetto, 2018b):

1. **The what:** What students do in the activity (e.g., the problem to solve, the issue to be addressed, the challenge to be resolved, or the task to be completed).
2. **The how:** How students complete the activity (e.g., the procedure used to solve a problem, the approach used to address an issue, the steps followed to resolve a challenge, or the process used to complete a task).
3. **The criteria for success:** The criteria used to determine whether students successfully completed the activity (e.g., the goals, guidelines, non-negotiables, or agreed-upon indicators of success).
4. **The outcome:** The outcome resulting from engagement with the activity (e.g., the solution to a problem, the products generated from completing a task, the result of resolving an issue or challenge, or any other demonstrated or experienced consequence of engaging in a learning activity).

Educators can use one or more of the above components (i.e., the what, how, criteria, and outcome) to design creative learning activities that blend academic subject matter with opportunities for creative expression. The degrees of freedom for doing so will vary based on the subject area, topics within subject areas, and teachers' willingness to establish openings in their lessons.

In mathematics, for instance, there typically is one correct answer to solve a problem, whereas other subject areas, such as English Language Arts, offer much more flexibility in the kinds of "answers" or interpretations possible.

Yet even with less flexibility in the kinds of originality that can be expressed in a particular subject area, there still remains a multitude of possibilities for creative expression in the kinds of tasks that teachers can offer students. As mentioned earlier, students in math can still demonstrate creative learning in the kinds of problems they design to solve, the various ways they solve them, and even how they demonstrate the outcomes and solutions to those problems.

Finally, teachers can use academic subject matter in at least two different ways to support opportunities for creative learning in their classroom (Beghetto Kaufman, & Baer, 2015). The first and most common way is to position subject matter learning as a means to its own end (e.g., *we are learning about this technique so that you understand it*). Creativity learning can still operate in this formulation by providing students with opportunities to learn about a topic by meeting goals in unique and different ways, which are still in the service of ultimately understanding the academic subject area. However, the added value in doing so also allows opportunities for students to develop their creative confidence and competence in that particularly subject area.

The second less common, but arguably more powerful, way of positioning academic subject matter in creative learning is as a means to a creative end (e.g., *we are learning about this technique so that you can use it to address the complex problem or challenge you and your team identified*). Students who, for instance, developed a project to creatively address the issue of contaminated drinking water in their community would need to learn about water contamination (e.g., how to test for it, how to eradicate contaminants) as part of the process of coming up with a creative solution. In this formulation, both academic subject matter and creative learning opportunities are in the service of attempting to make a creative contribution to the learning and lives of others (Beghetto, 2017c, 2018b).

The Role of Uncertainty in Creative Learning

Without uncertainty, there is no creative learning. This is because uncertainty establishes the conditions necessary for new thought and action (Beghetto, 2019a). If students (and teachers) already know what to do and how to do it, then they are rehearsing or reinforcing knowledge and skills. This assertion becomes clearer when we consider it in light of the structure of learning activities. Recall from the previous section, learning activities can be thought of as being comprised of four elements: the what, the how, the criteria for success, and the outcome.

Typically, teachers attempt to remove uncertainty from learning activities by predefining all four aspects of a learning activity. This is understandable as teachers may feel that introducing or allowing for uncertainty to be included in the activity may result in curricular chaos, resulting in their own (and their students) frustration and confusion (Kennedy, 2015). Consequently, most teachers learn to plan (or select pre-planned) lessons that provide students with a predetermined problem or task to solve, which has a predetermined process or procedure for solving it, an already established criteria for determining successful performance, and a clearly defined outcome.

Although it is true that students can still learn and develop new and personally meaningful insights when they engage with highly planned lessons, such lessons are “over-planned” with respect to providing curricular space necessary for students to make creative contributions to peers and teachers. Indeed, successful performance on learning tasks in which all the elements are predetermined requires students to do what is expected and how it is expected (Beghetto, 2018a). Conversely, the full expression of creative learning requires incorporating uncertainty in the form of to-be-determined elements in a lesson. As discussed, this involves providing structured opportunities for students (and teachers) to engage with uncertainty in an otherwise structured and supportive learning environment (Beghetto, 2019a).

Indeed, teachers still have the professional responsibility to outline the criteria or non-negotiables, monitor student progress, and ensure that they are providing necessary and timely instructional supports. This can be accomplished by allowing students to determine how they meet those criteria. In this way, the role that uncertainty plays in creative learning can be thought of as ranging on a continuum from small openings allowing students to define some element of a learning activity (e.g., the how, what, outcomes) to larger openings where students have much more autonomy in defining elements and even the criteria for success, such as a legacy project whereby they try to make positive and lasting contributions to their schools, communities and beyond.

The Role of Context in Creative Learning

Finally, context also plays a crucial role when it comes to creative learning. Creative learning is always and already situated in sociocultural and historical contexts, which influence and are influenced by students’ unique conceptions of what they are learning and their willingness to share their conceptions with others. As illustrated in Fig. 19.1, there are at least three permeable

contextual settings in which creative learning occurs. The first is the classroom context. Although classrooms and the patterns of interaction that occur within them may appear to be somewhat stable environments, when it comes to supporting creative expression, they can be quite dynamic, variable, and thereby rather unpredictable within and across different settings (Beghetto, 2019b; Doyle, 2006; Gajda et al., 2017; Jackson, 1990). Indeed, even in classrooms that are characterized as having features and patterns of interaction supportive of creative learning, such patterns may be difficult to sustain over time and even the moment-to-moment supports can be quite variable (Gajda et al., 2017).

It is therefore difficult to claim with any level of certainty that a given classroom is “supportive of creativity”; it really depends on what is going on in any given moment. A particular classroom may tend to be more or less supportive across time, however it is the sociodynamic and even material features of a classroom setting that play a key role in determining the kinds and frequency of creative learning openings offered to students (Beghetto, 2017a).

The same can be said for the school context. The kinds of explicit and tacit supports for creative learning in schools likely play an important role in whether and how teachers and students feel supported in their creative expression (Amabile, 1996; Beghetto & Kaufman, 2014; Renzulli, 2017; Schacter, Thum, & Zifkin, 2006). Theoretically speaking, if teachers feel supported by their colleagues and administrators and are actively encouraged to take creative risks, then it seems likely that they would have the confidence and willingness to try. Indeed, this type of social support and modelling can have a cascading influence in and across classrooms and schools (Bandura, 1997). Although creativity researchers have theorized and explored the role of context on creative expression (Amabile, 1996; Beghetto & Kaufman, 2014), research specifically exploring the collective, cascading, and reciprocal effects of school and classroom contexts on creative learning is a promising and needed area of research.

In addition to classroom and school settings, sociocultural theorists in the field of creativity studies (Glăveanu et al., 2020) assert that the broader sociocultural influences are not static, unidirectional, or even separate from the people in those contexts, but rather dynamic and co-constitutive processes that influence and are influenced by people in those settings. Along these lines, the kinds of creative learning opportunities and experiences that teachers and students participate in can be thought of as simultaneously being shaped by and helping to shape their particular communities, cultural settings, and broader societies. Consequently, there are times and spaces

where creative learning may be more or less valued and supported by the broader sociocultural context. Although some researchers have explored the role of broader societal contexts on creativity (Florida, 2019), additional work looking at the more dynamic and reciprocal relationship of creative learning in broader sociocultural and historical contexts is also needed.

Future Directions

Given the dynamic and multifaceted nature of creative learning, researchers interested in examining the various factors involved in creative learning likely would benefit from the development and use of analytic approaches and designs that go beyond single measures or static snapshots to include dynamic (Beghetto & Corazza, 2019) and multiple methods (Gajda et al., 2017). Such approaches can help researchers better understand the factors at play in supporting the emergence, expression, and sustainability of creative learning in and across various types of school and classroom experiences.

Another seemingly fruitful and important direction for future research on creative learning is to consider it in light of the broader context of positive education. Such efforts can complement existing efforts of researchers in positive education (Kern, Waters, Adler, & White, 2015), who have endeavoured to simultaneously examine multiple dimensions involved in the wellbeing of students. Indeed, as discussed, creative learning occurs at the nexus of multiple individual, social, and cultural factors and thereby requires the use of methods and approaches that can examine the interplay among these factors.

In addition, there are a variety of questions that can guide future research on creative learning, including:

- How might efforts that focus on understanding and supporting creative learning fit within the broader aims of positive education? How might researchers and educators work together to support such efforts?
- What are the most promising intersections among efforts aimed at promoting creative learning and student wellbeing? What are the key complementary areas of overlap and where might there be potential points of tension?
- How might researchers across different research traditions in positive education and creativity studies collaborate to develop and explore broader models of wellbeing? What are the best methodological approaches for testing and refining these models? How might such work promote student and teacher wellbeing in and beyond the classroom?

Creative learning represents a potentially important aspect of positive education that can benefit from and contribute to existing research in the field. One way to help realize this potential is for researchers and educators representing a wide array of traditions to work together in an effort to develop an applied understanding of the role creative learning plays in contributing to learn and lives of students in and beyond schools and classrooms.

Conclusion

Creative learning represents a generative and positive educational experience, which not only contributes to the knowledge development of individual students but can also result in creative social contributions to students' peers, teachers, and beyond. Creative learning thereby represents an important form of positive education that compliments related efforts aimed at building on the strengths that already and always inhere in the interaction among students, teachers, and educational environments. Creative learning also represents an expansion of prototypical learning efforts because it not only focuses on academic learning but also uses it as a vehicle for creative expression and the potential creative contribution to the learning and lives of others. In conclusion, creative learning offers researchers in the fields of creativity studies and positive education an important and complimentary line of inquiry.

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