Applied Creativity and the Arts

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Introduction

The question of whether creativity has been co-opted from the arts by the so-called creative and cultural industries in economic terms, and by STEM subjects in schools, continues to plague arts educators and those committed to the value of actionable creativity across the curriculum, including its different expressions in diverse geopolitical and regional contexts. In some spaces, the homelessness of curricular creativity is exemplified by the gap between the innovation-focused 'creative turn' on a conceptual level (Harris 2014), and how creativity now urgently seeks to find real-world expression in teaching and learning practices through transdisciplinary means. At the heart of this theoretical/applied tension sits the evidence of how arts education has long been an example to other domains of how to make play, creative problem-posing, and productive risk-taking core business, and yet has consistently been mostly ignored by curriculum policymakers and a suite of 'core subjects'. This essay makes the case for how arts-informed creative education can provide unique opportunities for bringing still-siloed separate subjects in compulsory education together (aka STEAM), through offering an urgently-needed transdisciplinary approach to learning, teaching and curriculum that retains the long-standing processes and knowledges of arts-based teaching and learning.

21st century skills and arts education

Not all countries have abandoned arts education as core business. For example, countries like Taiwan, Hong Kong and Canada retain a connection between creativity and arts education as a way to deploy the well-developed skills of arts education toward the new global focus on creativity as an employability skill (Carter et al, in press; Ortiz 2020; IJdens et al, 2018). Reports like the *International yearbook for research in arts education, Volume 5* (2017) have contributed greatly to debunking the myth that the new curricular focus on 'creativity and critical thinking' is at odds with more established arts education priorities and approaches. Using a more global rather than national lens to compare differences and similarities in approaches to both foci shows, rather, that creativity and arts share high value amongst teachers: "Creativity and innovation benefits were rated highest on average (4.6) and arts and aesthetics benefits next (4.5)" ((IJdens et al, 2018, p. 191). While we acknowledge that a preoccupation with definitional aspects of creativity in the curriculum have dominated the 'creativity discourse' in education to date, this is partly due to a turning away from arts education's well-established ability to action creative skills and capacities, as well as questions of assessment which – in the arts – have always focused on process rather than solely on product (Sternberg 2020; Harris & de Bruin 2018; Leong & Qiu, 2013).

The benefits and power of a fine arts education are connected to increased self-confidence and self-understanding, socio-emotional learning, enhanced communication skills and improved cognition (Babayants & Frey, 2015; Carter, Prendergast & Belliveau, 2015; Eisner, 2002; Gallagher & Booth, 2003). In the province of Quebec (Canada), for example, the Québec Education Program (QEP) dedicates Chapter 8 of its curricular document to Arts

Education where the overarching goal of arts education (i.e. drama, dance, music and visual art) is for "…these subjects (to) enable students to express their own reality and vision of the world and (to) help them to communicate their inner images through the creation and interpretation of artistic productions" (Le MEES, 2001, p. 206). Further, the core learning outcomes for art education are for students to be able to:

> Communicate and give concrete expression to (their) ideas, inner images, impressions, sensations and emotions in various artistic productions, by using or considering elements and principles specific to the artistic languages used; and
>
> (To) appreciate facets of his/her own works and those of classmates, as well as works by men and women of the past and present, from here and elsewhere, by referring to varied criteria and expressing himself/herself orally or in writing. (Le MEES, 2001, p. 207)

As a curricular project, arts education in this example has significant flexibility for teachers and students beyond the acquisition of specific skills in particular art forms. What is not articulated within such documents is the importance of fostering a disposition within students in the arts education classroom to be open to exploring and learning by embracing risk, wonder and using the imagination. Such a willingness to face the unpredictable means that one is able to look at things as if they could be otherwise…To take a risk is to open multiple unexplored spaces…To take a risk is to refuse interference with personal growth or the efforts to transform new spaces in and around the world (Greene in Ginsberg, 2012, p. vii). The creation of a classroom environment where students are able to take the necessary risks needed to create art, is arguably one of the greatest tensions for the trend of subsuming creativity for economic advantage as a stand alone skill that is "divorced from art's specificity" (Kalin, 2016, p.39).

The tension between focusing on the economic advantages of the creative industries, over the creation process in the fine arts all but eliminates "the radical democratic character by which the arts resist functionality" (Baldacchino, 2013, p. 354). Some of the "serious consequences for art educators who are latching onto the 'creative' bandwagon to justify their existence for teaching art in today's global designer economy" (Jagodzinski, 2015, p. 57) shifts the focus of art for arts sake to "mediocre art" (Gielen, 2013, p. 80). As Kalin (2016) argues in "We're all creatives now: Democratized creativity and education" releasing creativity from the exclusive purvue of the arts risks decontextualis ing artistic processes of creation that lead to formulaic endeavours that are "devoid of any ardent belief, ideology or conviction. The creative deed must be depoliticized, in other words" (Gielen, 2013). Creativity devoid of political opposition or social critique is also more readily appropriated (Adams & Owens, 2016, p. 16) and so if 21 st Century learning aims are to produce creative thinkers with transferable skills that can work among and beyond disciplines (Plucker, Kaufman, & Beghetto, n.d.) where creativity is taught on its own and separated from disciplinary application, how can we work more closely toward a shared goal of transdisciplinary creativity that does not lose the link to social critique? While discipline-based creativity may be less susceptible to pleasing the ever-shifting market forces as it is based on depth of insight and craft, innovative creativity compels artists and others to "inevitably spend a lot more time looking over their shoulder, trying to figure out what the customer wants rather than what they themselves are seeking to say" (Deresiewicz, 2015, n.p.).

Globally, UNESCO's 2013 articulation of "skills for work and life" through its UNEVOC (vocational education) programs have more recently been updated to respond to those skills now demanded by the job market, and seeks to link them with educational benchmarks. They include: critical thinking, creative thinking, communication, collaboration and teamwork, personal and social skills, ICT skills. The OECD and its PISA's 'creative thinking framework' (April 2019) respond to the ubiquitous question *Why assess creative thinking?*, with this report which suggests:

> Creative insights and advances have driven forward human culture across the world in diverse areas (Hennessey and Amabile, 2010[1]): in the sciences, technology, philosophy, the arts and humanities. Creative thinking is thus more than simply coming up with random ideas. It is a tangible competence, grounded in knowledge and practice, that supports individuals in achieving better outcomes, oftentimes in constrained and challenging environments. Organisations and societies around the world increasingly depend on innovation and knowledge creation to address emerging challenges (OECD, 2010[2]), giving urgency to innovation and creative thinking as collective enterprises. (OECD 2019, p. 4).

In considering the diverse forms and applications of creative thinking across different subject domains, the OECD report suggests that educators should be attentive to questions such as: *is creative thinking in science different to creative thinking in the arts*? (p. 8). As many arts educators have argued, the OECD suggest that it is, and that foundational cognitive "researchers like (Torrance, 1959) assumed that the performance of individuals in creativity tests could be generalised, and that creative performance in one domain could be transferred to another. However, more recent studies tend to reject this assumption" (2019, p 8). So why do national curricula and policy documents continue to include creativity and creative thinking general capabilities that are generalised in exactly this manner, and which continue the assault on dedicated arts learning in the curriculum?

Teaching creativity (domain specific)

'21st century skills' like creativity and collaboration are increasingly accepted as best-practice guides for education and curriculum innovation, in both non-formal and formal contexts as necessary to reduce the gap between academic and business organisations on the one hand, and the wave of self-taught networked learners on the other. As a result, a range of new approaches, including examples such as the Gradual Immersion Method (GIM), are being designed to enhance collaborative creativity using interactive devices and augmented reality (AR), to support creativity-based learning, such as in the integrated study of Science, Technology, Engineering, Arts and Mathematics (STEAM) (Sanabria & Aramburo-Lizarraga, 2017). Yet arts educators know that such integrated methods have been used for decades. Within the crossover literature which traces creativity in/as the arts, two main streams of focus have been on the artistic process (Patrick, 1937; Getzels and Csikszentmihalyi, 1976; Mace and Ward, 2002; Yokochi and Okada, 2005) whereas others have focused on the creative process (Wallas, 1926; Osborn, 1953/1963; Runco and Dow, 1999; Howard et al., 2008). These two types of processes may be, however, somewhat distinct from each other because the creative process is not always dedicated to artistic creation, and productive work in the arts may not always involve creativity, in terms of specifically original thinking. The long tradition of creativity research emerging from the fields of educational psychology and cognitive research still remains strong, with currently more threaded focus on *both* artistic and creative processes and in what ways they are

convergent versus divergent (Botella et al 2018). In other words, they retain a focus on the thinking process, rather than aesthetics, relational or ecological aspects of creativity studies.

Transnational corporations like the Lego Foundation have long been involved in advancing and impacting education curriculum and testing. Lego have been one of the first corporate contributors to promoting the incoming PISA test for creative thinking and highlight the potential impact as:

- **Policymakers will know what it is -** As with many skills, there are many differing interpretations of what creative thinking is and how it can be measured. Drawing upon the expertise of some of the world's most established experts, the assessment creates a common definition of creative thinking, and a means to assess it, recognised by multiple member states and education systems. This is a first.
- **Policymakers will know what works** – Policymakers, parents, teachers and learners will all be better equipped to understand how their education systems are faring, and Ministries of Education in participating countries will benefit from data and insight on what works (and doesn't) in developing this skill in their learners. Critically, they will also be better positioned to draw upon insights and lessons from others.
- **Policymakers will take action** – Given the increased demand for and attention on 21st century skills, particularly creative thinking, this new information will almost certainly be used by Ministries of Education across the globe to inform and trigger education systems reform towards skills development. (Bouchie 2019)

Importantly though, Bouchie restates that states and systems will need to be members in order to participate in the tests and to 'benefit' from them and the attendant resources. OECD has long been conducting a global drive to gather resources from teachers and researchers in creativity in both secondary and tertiary contexts across the globe, in order to compile one clearinghouse for definitions, assessments and resources to serve creativity in the curriculum (although not all arts-focused). What is less well known, however, is that participants were required to pay a steep participation fee. This seems another version of the generalising impetus of Torrance previously recognised as ineffectual. Education systems, institutions and teachers will have to determine for ourselves whether participation in global generalising testing and curricular approaches is most efficacious or more localised approaches are preferred. Further, concerns with accountability testing – evaluation – of creativity, have previously been expressed through the work of Beghetto and Eisner who contend that traditional forms of assessment is what actually crushes creative opportunities (Beghetto, 2010; Eisner, 2009). This occurs since many evaluations validate memorisation and as a result teachers narrow classroom content to ensure maximum success on standardised tests (Beghetto, 2010), underscoring concerns for large scale testing of creativity. In other words, while a PISA global creative thinking test might serve to elevate creativity to the 'core business' level of literacy and numeracy, it may well further de-couple creativity and the arts in education.

The arts and creativity: two sides of the same coin

Yet in addition to this proliferation of work in creativity studies, there exists a renewed attention to the arts (Ewing & Gibson 2015; Ewing 2011; Harris 2018; Sinclair et al 2017; Dunn & Stinson 2011; Walsh et al 2017), including the ways in which more traditional 'arts educators' do or do not share perspectives with those who consider themselves STEM or other diverse disciplinary 'creativity' advocates in schools (Selkrig & Bottell, 2016). While creativity and critical thinking, in particular, are appearing more frequently in national

curricula or guiding documents (Australian Curriculum; Singapore's 'Thinking School/Learning Nation initiative'; Wales national curriculum; American Common Core), arts education varies more widely from country to country and within provincial/state boundaries within countries (Carter, 2019; Harris 2018; Sinclair et al 2017; Dunn & Stinson 2011; Walsh et al 2017). Some recent international studies have done comparative work showing how STEAM (or at least the arts part) enhances STEM approaches, whilst losing none of its traditional skills in STEM, often using large-scale data sets (Shatunova et al, 2019; Aris & Orcos, 2019; Conradty & Bogner, 2018). One recent study looked specifically at the link between art and creativity, comparing arts and science high school students in Turkey (Ulger, 2019), finding that creative training in science, for example, does not produce the same cognitive or practice results in students as does arts training. Some arts scholars (as well as those in design, gaming, architecture and others) have contributed significantly to the arts/creativity nexus, and in doing so, especially in recent years, have provided game-changing evidence-based research that enables others to build upon these kinds of empirical studies in order to continue to argue the unique value of arts skills in creativity training.

Robyn Ewing's key paper *The arts and Australian education* (2011) in particular, but including her large and continuing body of work linking arts, literacy, drama and creativity, has argued the social, literacy and emotional benefits of embedding the arts, as well as strengthening skills in creativity and critical thinking across the curriculum. Nevertheless, there are significant (and increasing) roadblocks to implementing arts-based teaching and learning to foster creativity skills across the curriculum. Ewing has long argued the importance of integrating creative arts into classroom teaching, learning, and curriculum implementation. She makes a passionate and well- established argument for embedding arts-rich experiences in diverse classrooms to assist students in developing 21st century skills (Mortimer 2019; Stafford 2019).

Creativity across the education lifespan

There is an increasing body of research into the higher instance of portable creative skills by arts graduates than others, or what has also been defined as the 'identity dimensions' of creativity (Carter, 2014; Gube & Lajoie, 2020; Harris 2016). Further, Gube and Lajoie (2020) propose the term "applied creative thinking" to capture the creative process of being able to use one's expertise within new parameters in order to develop new knowledge, processes, or products. Within the research on creativity and education (Fasko, 2011; Gajda et al., 2017), building a learning environment that nourishes creativity includes: 1) Content being student centred; 2) Measurement of outcomes are intrinsically motivated; 3) Trust and failure exist in the learning environment; and 4) Teachers model creative behaviour. In this way, fostering creativity across the lifespan begins in the K-12 classroom and in helping educators understand how to create an environment that fosters creativity in transdisciplinary contexts is essential for the realisation of such goals.

Conclusion

This essay asks whether arts-informed creative education can still provide unique opportunities for bringing still-siloed subjects in compulsory education together (i.e STEAM). Such a transdisciplinary approach hinges on student-centred content and methods, the measurement of outcomes that are intrinsically motivated, and an understanding that trust and failure exist in the learning environment where teachers can model creative behaviour. This shows that the question is not whether a transdisciplinary approach to learning (i.e. STEAM) is the significant one for fostering creativity, because all evidence indicates that it is, but how to foster and integrate creativity across disciplinary contexts. In the example of

STEAM, creating learning opportunities that cross boundaries and foster creativity provides an example of how collaborative assignments, the interconnection of content and learning from others with different disciplinary knowledge can help us all to grow, wonder and imagine.

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