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"Mistakes Can be Beautiful": Creative Engagement in Arts Integration for Early Adolescent Learners

ABSTRACT

In this study we explored students' perspectives and experiences engaging in an arts integration learning model during middle school through a pluralistic lens of creative engagement in learning. The sample included $N = 86$ students in Grades 6–7 attending schools in fringe rural and urban locales from small and mid-sized cities in the Pacific Northwest. We used a grounded theory approach to explore how creative engagement takes shape for the early adolescent learner. Our conceptual framework integrated intrapsychological (inward) processes with interpsychological (outward) exchange in the social environment of an arts integrated classroom. Schools involved in the study were part of a larger mixed-methods research investigation and received intensive support for school-wide arts integration development. We found that students valued opportunities in arts integration for (a) choice, (b) the expression of their unique interpretations, (c) taking risks and making mistakes, (d) recognizing and applying their Studio Habits of Mind, and (e) enhancement of motivation and engagement in learning. The need for competency, belonging, and autonomy were important conditions of the learning environment and the need for meaning-making was paramount in the process of creative engagement.

Keywords: creative learning, arts integration, engagement, metacognition, grounded theory.

INTRODUCTION

> There is no righter right thing that humans know than the experience of creative engagement—making worlds we care about and exploring the worlds others have made—and there is a lifetime of pleasure to be had in the lifelong learning.
>
> *(Booth, 2013)*

According to an embodied and affective perspective (Dewey, 1925; Immordino-Yang, 2015), to make meaning in learning necessitates an active exchange between the learner and the environment. This inward and outward process incorporates the learner's personal affect, the social response of peers, the learning stimuli, and the educators who design and facilitate the learning experience (Anderson, 2018). The *self* responsible for individual thought and action emerges from a constant responsiveness of inward embodied feeling to an outward environment of social, cultural, and environmental conditions. Integration of the artistic process into the learning of other academic content can uniquely facilitate this dynamic exchange for a classroom of learners. Drawing on the artistic perspective stimulates both individual meaning-making and embodied engagement (Burnaford, Brown, Doherty, & McLaughlin, 2007). A growing body of research illustrates the promising effects of arts integrated learning, especially for marginalized students (e.g., Hardiman, Rinne, & Yarmolinskaya, 2014; Robinson, 2013). Learning from students about how that experience unfolds can further clarify the underlying assumptions that guide development in theory and practice; this study sets out to provide such a description.

In general, the learner's perspective on creative and artistic development in early adolescence—the middle school years—is lacking in the literature on arts integration, arts education, and the learning sciences (Lassig, 2013; Moorefield-Lang, 2010; Rostan, 1998, 2010). Lassig (2013) found four approaches to

adolescents' creative process—adaptation, transfer, synthesis, and genesis—but only included students with perceived high levels of creative characteristics and focused solely on the inward process. In this current study, we organize the early adolescent perspective from diverse students within the socio-cultural setting of a classroom, looking for both the inward and outward process of their *creative engagement.* We posit that the contribution of the adolescent perspective on creative engagement in the school context can (a) clarify which mechanisms may explain the positive effects of arts integration identified in past research (b) focus future research and intervention efforts, and (c) identify the most relevant creativity theory for this developmental period and context.

Arts educator and researcher, Eric Booth (2013), invoked the idea of creative engagement, emphasizing that creative engagement sets the conditions to create "... worlds we care about and explore the worlds others have made" (p. 1). Creative engagement suggests that the exchange of creative expression with others is just as important as the unique creative experience of the individual. Building on Booth's ideas, creative engagement for adolescent learners can incorporate a multiplicity of lenses including emergentist and embodied philosophy, affective neuroscience, and research in creativity and educational psychology—research and ideas that span a century (Anderson, in press). We build on that conceptual work, through the reflections and insights of 86 middle school students, to explore the artistic and creative development in early adolescence within the socio-cultural setting of a school. We applied the methodological tradition of grounded theory (Charmaz, 2014) to reconstruct the learner's pathway to creative engagement. We integrated students' perspectives and experiences into theory from the educational psychology fields of motivation (Ryan & Deci, 2004), engagement (Fredericks, Blumenfeld, & Paris, 2004), creativity (Beghetto, 2016), and research on students' experience learning in and through the arts (Moorefield-Lang, 2010; Rostan, 1998).

Creative engagement presents a multidimensional frame converging influences of cognitive learning, creative inquiry and expression, and the emotional salience experienced by a learner in the context of meaning-making in the classroom. Creative engagement connects the body-mind process of meaning-making, unique to each learner, to the motivational factors, largely dictated by conditions of the learning environment (Anderson et al., 2018). Theory about engagement in learning suggests that cognitive, behavioral, emotional, and agentic (see Reeve, 2013) engagement rest on the fundamental needs of autonomy, relatedness/belonging, and competence (Fredericks et al., 2004). In this study, we posit that arts integrated learning may stimulate creative engagement in an uniquely powerful way for a community of early adolescent learners; however, the field needs to hear how students describe this process. We explored student perspectives at a period in early adolescence of rapid development, identity formation, and school transition, when the biological and social desire for belonging, autonomy, and competency is demonstrably powerful (Eccles & Roeser, 2011; Meeus, van de Schoot, Keijsers, Schwartz, & Branje, 2010).

CREATIVE LEARNING: SOCIAL, PSYCHOLOGICAL, AND METACOGNITIVE

Creativity theory applied to learning, once static and isolated, now leans toward an integrated model to include creative thinking, self-beliefs, motivation, attitudes, metacognition, behaviors, and achievements (Silvia, Christensen, & Cotter, 2016). Some researchers focus on the mediating and moderating factors that relate to creative learning and its direct link with academic outcomes (Gajda, Karwowski, & Beghetto, 2016). Others identify the types of domain-specific knowledge and domain-general cognitive processes that precede creative potential (Baer, 2016; Beghetto, 2016). Creativity research has placed creativity on a spectrum from individual meaning-making and novelty in learning to eminent impact on the world (Kaufman & Beghetto, 2009). Moreover, Glăveanu (2013) reframed the creative process, socio-culturally, where the creative person is actually an *actor* with a socio-cultural *audience* and specific environmental *affordances*. That perspective centers the individual, and the unique creative resources and perspectives they express to the world, within a socio-cultural context that shapes the individual's unique development of creative resources. These new approaches highlight the interdependency of the individual and the surrounding environment. That recognition helps avoid a false dichotomy that often results in research focusing too heavily on the individual inward experience and ignoring the environment that largely shapes that experience.

Inward and outward meaning-making

In his 1950 address that launched our modern-day study of creativity, Guilford blurred the distinction between creativity and learning suggesting that "a creative act is an instance of learning..." (Guilford, 1950, p. 446). Most recently, Beghetto (2016) modeled the link between creativity and learning through

the relationship between creativity-in-learning (the development of personally meaningful interpretation and understanding) and learning-in-creativity (the role of sharing with others to enhance the collective creative experience). In this way, creative learning is an integrated cycle of *intrapsychological processes*—personally inward, embodied, cognitive, and expressed—and *interpsychological processes*—the response of the environment to challenge or validate. The stimuli within the learning environment triggers the inward, embodied process of meaning-making that extends outward into the environment for interpretation and response from others. The socio-cultural aspects of the classroom connect intentionally to the emotional qualities of the learning experience; both contribute to a learner's creative engagement. In this way, the learners' body-mind responds to the environment as an inward process, and the environment responds back to the learner. That response generates a cyclical inward-to-outward process in learning between the learner and the environment. Theoretical and empirical work in affective neuroscience reinforces an embodied, generative meaning-making dynamic between the emotional body-mind and the environment (Anderson, in press).

Engagement, metacognition, and agentic action

Central to a reflective process, metacognition facilitates personal reflection and heightens a learners' engagement (Nickerson, 1999). As Flavell (1979) noted, learners in early adolescence begin to develop more understanding about their thinking processes, learning habits, and knowledge about the cognitive processes of others (Brown, Bransford, Ferrara, & Campione, 1983). Metacognition in the artistic and creative process has been explored through theory of mind (Goldstein & Winner, 2012), Gardner's frames of mind (Davis, 2000), and observation of artists to form the Studio Habits of Mind (Hetland, Winner, Venema, & Sheridan, 2013). More recently, creative metacognition has been conceptualized as an individual's process to appraise oneself and the situation and, in turn, regulate and direct thinking and behavior with specific strategies (Beghetto & Karwowski, 2017). Creative metacognition is a self-belief oriented to the present moment, which dictates modifications to an approach or thinking based on changing circumstances. Recent theoretical developments (Karwowski & Beghetto, 2018) suggest that creative behavior should be thought of as *agentic action,* where an individual's creative potential becomes creative behavior and accomplishments, when supportive creative self-beliefs and values are in place. Metacognition, then, serves as an important process to help understand the interplay between inward and outward dimensions of a learners' creative engagement in early adolescence.

ARTS INTEGRATION TO STIMULATE CREATIVE ENGAGEMENT

Past research points to the potential for the arts to affect the ecology of a students' experience in school (Thomas, Singh, & Klopfenstein, 2015). Scholars documenting adolescents' perspective on engagement in art courses identified themes such as motivational transfer to other classes, high degree of commitment to the work, choice, peer interactions, career aspirations, confidence to present work, recognition of different types of talents, and stress relief (Moorefield-Lang, 2010; Rostan, 1998, 2010). The effect may relate to the difference that *difference* can make in a learning environment (Glăveanu & Beghetto, 2017)—exhibiting unique perspectives is the cornerstone to the artistic process. The arts generate opportunities for different perspectives to open new meaning and different approaches to arrive at a similar learning outcome (Peppler & Davis, 2010). Arts integration proposes that transformative experiences in arts learning need not reside solely in a structured art classroom. A descriptive analysis of the learner experience in arts integration in early adolescence can help to clarify the purpose and process for an integrative approach.

STUDY CONTEXT

This investigation exists within a mixed-methods research program to develop and study a schoolwide arts integration model in middle school (Anderson & Pitts, 2017). Each participating school collaborated with a professional local artist to (a) develop school-wide opportunities for creative engagement of faculty and students, (b) design teaching and learning modules across the school year that integrated content and skills from the art disciplines and other academic areas, and (c) co-teach multi-week modules with different teachers in a grade level across a year. Teachers and partnering teaching artists collaborated across subject areas and focused on standards-based integration, social-emotional learning, and/or metacognitive development (Anderson & Pitts, 2017).

During the 2 years covered by this study, students participated in a variety of arts integration experiences. In math class, some built artistic weavings with found objects and used mathematical rotations or

reflections to create a new design. Others learned about math anxiety, then used the metaphor to design their own three-dimensional "math anxiety" monster to explore how they respond to anxiety. In English language arts, some students read a historical novel and identified key moments to build tableaux vivants ("living picture") using their bodies to illustrate the scene. They photographed those tableaux vivants scenes and used vocabulary from the novel to create an illustrated book portraying the story with their own bodies. In science, some students learned about insect anatomy and made artistic sculptures for assemblages. Other students made artistic models of different atoms and molecules and placed these into a large, collective mosaic of different elements of the human anatomy. In social studies, some students built models of the world, creating sculptural metaphors to define their own culture and place. These curricular arts integration examples portray a multidimensional and flexible approach to support students' creative and academic skill development and enhance affective engagement.

In the context of this intervention, the current study explored students' perceptions of art and creativity, their experience with arts integration in school, and factors that contributed to their engagement in and out of arts integration. We used a grounded theory method through an interpretive phenomenological perspective (Porter & Cohen, 2013), describing participants' unique experience and identifying patterns across students. The following research question organized this study: *How do students in early adolescence describe creative engagement in arts integrated learning within the socio-cultural setting of a classroom?*

METHOD

This study analyzed data from interviews with diverse middle school students with the aim of understanding their experiences and perspectives about arts integrated learning. To describe and interpret the middle school student perspective, we used grounded theory (Charmaz, 2014) to develop codes that emerged as most salient across student participants.

SETTING

The arts integration intervention took place in two mid-sized city middle schools, one suburban mid-sized middle school, one small urban Grade 7–12 charter school, and one mid-sized middle school in a fringe town in the Pacific Northwest, each identified by the state as low-performing academically with a majority of economically disadvantaged students. The arts integration intervention was experienced by all sixth graders and their classroom teachers in four schools. The charter school provided arts integration to the seventh and eighth graders during the period covered by this study. Table 1 describes the demographics of each school.

TABLE 1. Descriptive statistics of participating schools from 2013 to 2014 school year data

Variables	School A (N = 384)	School B (N = 119)	School C (N = 334)	School D (N = 491)	School E (N = 560)
Students with disabilities	12	14	21	15	18
Free- or reduced-lunch eligibility	68	62	76	59	84
English learners	11	0	7	7	21
Black-African American	<1	0	2	1	2
American/Indian/Alaska Native	2	2	3	4	2
Asian	2	1	1	1	1
Hispanic/Latino	24	9	17	11	29
Multiracial	7	9	8	9	8
Native Hawaiian/Pacific Islander	<1	0	2	0	1
White-Caucasian	65	79	68	74	57
Proficient in math	58	41	56	45	53
Proficient in reading	72	75	75	63	64

Note. Data retrieved from the school reports with state department of education. Numbers represent percentages for each category. Percent proficient in reading and math refers to students who passed the state benchmark on the state assessment in 2013–2014, a prior year to the start of the of the data collection.

PARTICIPANTS

This study included a random sample of students from schools participating in the arts integration research project. With Institutional Review Board approval, we established the sample of 86 students (16 males and 19 females in spring 2015; 19 males and 24 females in winter 2016; four females and four males in winter 2017) selected on the day of interviews or focus groups. All students experienced the arts integration intervention in at least one subject area and all focus groups and interview transcripts were analyzed for this study. Students experienced arts integration in a variety of subject-specific instructional settings, including social studies, science, math, literacy skills, and leadership. Beyond gender, the characteristics of students included in the interviews and focus groups were not retained for reporting. Researchers and teachers selected students randomly to ensure a diverse demographic composition that reflected the class and schoolwide composition, described in Table 1.

DATA COLLECTION

We interviewed students to synthesize a diverse but cohesive model of the student experience of arts integration. We aimed to clarify theoretical underpinnings of creative engagement in adolescence by integrating themes generated from student perspectives with existing theories. We completed semi-structured focus groups and interviews during spring 2015 ($N = 35$) at least 1 month after students had experienced arts integration in Grade 6; winter 2016 ($N = 43$) during the arts integration experience of students in Grade 6; and winter 2017 ($N = 8$) during the arts integration experience of students in Grade 7. We refined analyses, iteratively, as each round of data collection occurred.

DATA ANALYSIS

Our grounded theory approach followed Charmaz's (2014) steps, starting with inductive data analysis, invoking iterative strategies to switch between the data and the analysis and employing constant comparative methods within the data. As a constructivist methodological approach to qualitative research, grounded theory posits that theory should build from the data—individuals' beliefs, perspectives, and experiences—directly without the narrowing constraints of predetermined coding dictated by extant theory. By initiating the whole process of theory-building with inductive thematic development drawn out of the data, grounded theory assumes that existing theory is not sufficient or relevant to the context of the inquiry (Charmaz, 2014). Through a deductive, theory-driven approach, important empirical phenomena may not be identified (Levitt et al., 2018).

Given the paucity of existing research on the creative learning experience in adolescence, we felt a grounded theory would offer new, potentially unexpected, insights about creative engagement in early adolescence. After initial line-by-line coding of two researchers, a team of four researchers applied the codebook to one transcript. The team discussed emergent themes and refined the codebook to integrate researchers' self-reflexivity and achieve efficiency, clarity, and consistency (see Appendix S1). The integration of diverse perspectives can maintain complexity across different stages of code identification and theory development (Anderson, Guerreiro, & Smith, 2016). When the codebook was finalized, a single researcher coded all data. A team of four researchers then categorized the coded data into groups by theme. Each researcher analyzed those themes, writing memos to evolve understanding of the data. The researchers worked independently, then met to discuss themes and refine organization.

Corbin and Strauss' (2008) conditional-consequential paradigm guided the analytic process. During this process, quotations within each code classification, grouped by inward and outward processes, were compared to one another and across classifications through three lenses: (a) the context in which the quotation occurred, (b) the conditions that provided the opportunity for it to occur, and (c) the consequences that arose, as a result. This organization strategy linked contextual and socio-cultural factors to actual processes using everyday logic (Corbin & Strauss, 2008). The analyses were organized by theme and synthesized into a thematic framework, guided by creative engagement, to contribute understanding about the inward and outward dimensions of arts integrated learning.

After the first round of collaborative analysis and thematic development, eight new students were interviewed after completing an additional year of experience in arts integration. The collaborative analytic cycle occurred twice before a single researcher synthesized results across researchers into a coherent whole framed within creative engagement. Each team member provided feedback on this synthesis before a final version was complete. In sum, data analysis occurred in nine steps (a) open coding, (b) deductive comparison, (c) inductive conceptual synthesis, (d) categorical coding, (e) independent analysis by theme, (f) group

refinement and questioning, (g) additional data collection and analysis, (h) independent refinement and synthesis, and (i) group check and refinement (see Appendix S2).

FINDINGS

We set out to capture, through interviews and coding analysis, a description of adolescent learners' experience in an arts integration program. Overall, we found five of the codes most saliently characterized the student experience. Three of these elements described the inward, intrapsychological experience, (a) metacognitive strategies (i.e., *metaskills*), (b) motivation and engagement, and (c) personal expression. The remaining two elements comprised students' outward interactions, (d) hands-on and embodied social learning, and (e) voice and choice (see Table 2 for frequency counts). We analyzed remaining data falling under the three codes— envision and apply, esthetics, and play and tinker—alongside the inward dimensions and the three codes—group or individual work, real world experience, and instructional strategies—alongside the outward dimension. Across responses, the five main themes were integrated, resulting in an overall description that captured inward processes, outward interactions, and how the integration experience extended beyond the classroom for students. Here, we draw on student voices and our synthesized analysis to best describe the student experience in creative learning, moving from descriptions of the inward experience outward.

INTRAPSYCHOLOGICAL PROCESS IN CREATIVE LEARNING: REFLECTION, METACOGNITION, AND INQUIRY

Many students described a process of inward reflection, philosophical inquiry, metacognitive awareness, and expression to explain the arts integration experience. One student's illustration of a writing exercise emphasized that reflective process—" It was just like to express yourself, not really to write, it was just to express what you had in mind". Student responses seemed to reflect a recognition of an internal experience in which students found inspiration or motivation through their own emotional state of being and translated that inward presence—"like you are in your own world"—into outward creative production. Students suggested they could draw on personal experience, awareness, and inward feeling, while learning productively toward other academic objectives. Most often, the emotional valence was positive, exemplified by one student's reflection, "I've actually been like more happy. I've been like more expressed. . ." and another student's insight ". . .[arts integration] keeps me calm and it helps me out from what things I'm going through at home." The inward, emotionally connected and potent experiences described by students reinforced the personal connections made through arts integrated learning.

The arts integration experience stimulated an emotionally charged philosophical and metacognitive awareness of the learning process for many early adolescent learners. As one student noted, "[the arts integration program] wants to work on your weaknesses to make them your strengths." According to students, to become open in the learning process requires awareness of one's thinking patterns and awareness of self-beliefs that reinforce limitations of creative potential—a reflection of creative behavior as agentic action. Some seemed to notice that the arts integration process was working to reverse those thinking patterns with practice. Students applied metacognitive effort to transform deficit-framed, fixed mindsets (the notion that certain traits are inherent and unchangeable, see Hochanadel & Finamore, 2015), about creative ability, sharing ideas about creative potential that focused on process, concentration, and attitude rather than immutable traits. "I'm seeing a couple of people now that are just super creative. . .some people just kind of want to rush through the work, and some people want to take the time to like explore the different supplies, and colors, and stuff." This perceived importance of self-regulation illustrated a maturing duality in the source of creativity, noting both the *person* and the individual's *process*.

TABLE 2. Code Occurrence for Most Common Codes During First Two Data Collection Phases

Classification	Code	Spring	Winter	Total
Inward	Metaskills	76	97	173
	Motivation and engagement	76	75	151
	Personal expression	37	81	118
Outward	Hands-on and embodied learning	45	50	95
	Voice and choice	45	31	76

A similar tension was noted where one student identified that "I am a very artistic and creative person", and another student suggested that perhaps arts integration programs were for "students who like art", implying a perceived difference in who might enjoy arts integration in relation to either perceived skill or preference. The notion that creativity could be a skill was also articulated, ". . . creativity is not just something you are born with, it could take hard work, like it can be really, really hard work. . ." Students often linked concepts of creativity and individuality, such as in the following excerpt, "so when I think of creativity and art I think of individuality, bright colors. I think of like making different things and like not staying in the normal". In the context of the classroom, this idea of *normal* suggests typical learning lacks opportunities for divergence from an expected norm. That description, and others, suggested that early adolescent students perceived creativity as dynamic and pluralistic, a fluid process tied to unique interpretation and expression.

Students described artistic and creative processes as part of everyday life. With philosophical interest, arts integration stimulated contemplation about moments in the learning process. As one student remarked, "there is no such thing as mistakes because that mistake can be something good . . . like huge things, super cool." Another student shared, "I like to try to make mistakes . . . the people that learn from their mistakes are the people who really go forward in life". These statements represent, growth-oriented, fail-forward mindset about learning and also a self-belief that mistakes represent an opportunity not a deficiency.

The arts integrated learning approach disrupted normative assumptions about mistakes and perfection—two powerfully salient ideas that arose consistently across students. Students gained greater access to their own ways of thinking. One student noted the oxymoronic nature of perfection, "you don't automatically learn how to walk. . .to do anything." Generally, students demonstrated a heightened awareness about remaining open to surprise in the creative learning process. One student recognized a mistake for what it can become—"a portal to a new discovery". Playfully appreciating important discoveries in mistakes, one student shared its "like you fall and there's a $20 bill in front of you."

INTRAPSYCHOLOGICAL PROCESS: EMBODIED ENGAGEMENT AND FLOW

For some students who reported not enjoying school, arts integrated learning was stimulating. Students who reported school as "boring" or "not enjoyable" also reported that arts integrated classes allowed them to establish a connection to school. One student said: "I think I learned a lot with [arts integration] because I usually don't like school. I don't like going to school. And to be able to do art . . . it helps me go to school." Another noted that engagement could have a cascading effect, sharing that ". . . the [arts integration] program is really nice. It helps kids get more involved in art and other stuff, and if they get involved in art they might feel more allowed to be more involved in other things." Another student said that arts integration activities motivated them by pushing them beyond their "comfort zone". For this student, and others with similar experiences, arts integration experiences represented a chance to break patterns and pursue the benefits of manageable risk-taking within a safe environment.

Arts integration experiences seemed to help students find a flow—a heightened state of focused engagement in production. One student described a creative flow state experienced in arts integration.

> . . . we were exploring with salts with paintings and you'd paint it and you'd put the salt on it. . . then, you'd color in with the wax and you'd paint over it. . .. You just focus on it and block everything else out . . . your mind is looking at this and it's telling you what to do. You're doing all these different things. You're seeing a little bit of it at the time, you're taking little pieces, and then you put it all together at the end and it's beautiful.

As another student suggested, this state of flow felt like ". . . when you're having fun, but so focused. Nothing else matters. You're putting your heart into what you're doing." Those expressions illustrate an embodied sense of flow experienced by students. According to students, arts integration experiences heightened the emotional quality of learning, stimulating flow experiences and heightened engagement. Given that more than 20 students, a quarter of the sample, freely expressed that arts integration was simply "more fun", the enhanced motivation, in part, emerged from a sense of enjoyment—key to the creative process.

INTRAPSYCHOLOGICAL PROCESS: HANDS-ON, PLAYFUL, AND AGENTIC LEARNING

Many students described how the hands-on aspect activated their physical engagement in learning through the use of their bodies and a variety of materials. Hands-on learning was most meaningful as teachers set expectations about content, yet students engaged physically with materials to investigate their

curiosities and cultivate and demonstrate understanding. Far from frivolous, play appeared necessary to produce a personally meaningful relationship to the work. One student described an arts integration activity, "we take a piece of paper and we just look at [another student] and try to draw their face without looking at the paper". This *blind contour* drawing was playful to the student, required minimal teacher direction, and developed deeper observation without the concern of working toward a "final product" for exhibition. This early play with a new media and form highlighted a general sense from students that arts integration emphasized the creative process over product.

Students also described an atmosphere of autonomy and choice in the arts integration experience. The following sentiment describes the imaginative and reflective process leading to a sense of self-direction.

> Because like usually it's easier to come up with ideas when you just imagine it in your head . . . It's where you think when it's quiet and such because you don't need like a lot of people saying like you are making the wrong choice or you shouldn't be doing that and you can just make your own decisions.

Space for autonomy deepened engagement by allowing students to explore notions of individuality, creativity, and expression. A sense of agency—confidence, control, and value—were constant themes in student reflections and perceptions, exercised through choice in medium, style, subject, and timeline. Students indicated that a degree of choice and voice was necessary for them to become creative in their work. That perspective revealed an interdependence between creativity, competency, and autonomy. The arts integration experience was described as a "free" environment, different from other classes with more prescribed directions for learning.

> . . .the main reason I don't like doing stuff that [teachers] have us do because they don't give us much freedom to do it. What I like about [arts integration] is that once you do [arts integrated work] and it doesn't need to be something. . .there is a lot of freedom to do what you want when you create.

Whereas fun and engagement related to freedom, restrictive direction from teachers related to stifled creativity and lower-quality products. When talking about outcomes, students tended to focus on autonomous self-assessment in the form of emotional response to the experience and pride in their effort and products. Notably, students seldom linked external sources of praise, such as teachers or peers to their satisfaction or pride, which suggested arts integrated learning stoked and sustained an intrinsic drive to create, share, and learn. Students took greater risks compared to learning in art and other academic content areas, in isolation. One student learned from their arts integration experience that "mistakes can be beautiful".

INTERPSYCHOLOGICAL PROCESS: DIVERSIFYING CONNECTIONS AND CONTENT

Students underscored the way in which student-to-student interaction affects their overall learning experience and level of emotional engagement and personal expression. Some described individual work to be "comfortable," "focused", and beneficial because one "cannot be hurt" and that "you don't have to depend on others" or you can have "more imagination." Other students seemed to prefer group work in arts integration, describing it as "sharing creativities," "easier", with "more ideas", "fun", a source of "belonging", and a way to "split up work to get it done".

Another student described an arts integration activity in which they created quick paintings with different materials at several tables. The student noted an essential component of interpersonal relationships: "I met some people. They all did their own unique thing. I liked how their outcome came with all of it. . .We started talking about it, then she complimented mine and I complimented hers." Informal peer-to-peer engagement around shared projects or peer-to-peer feedback promoted risk-taking and generated outward connection and validation from peers. The appreciation of individuality, unique skills, or different approaches highlights the fundamental need for belonging.

Expressing creative possibilities divergent from the norm presented a challenge for early adolescents and raised philosophical questions about the role of others in the emergence of personal creativity. A student indicated that arts integration helped some students to not "choose to hide [their creativity] and convince themselves that they're bad." In this way, students' creativity relied on engagement with others to become more than just an inward, and sometimes hidden, process. That tension highlights the clash of an accepted societal norm, that some people are more creative than others, with the conception of creativity as a process that all learners are capable of adapting for their own use if they believe they can and its worth the effort.

Expressing the idea that students "hide" their creative potential indicates a belief that others have the latent capacity, though they may be unwilling to expose or express it for various reasons. The idea that some students' latent creativity remains "hidden" is seen as a missed opportunity for others to see through another's unique lens.AUTHOR: Please check the edit made in the sentence "the idea that. . .... unique lens".

When students observed creative engagement unfold they were able to see some of their own habits and experiences more clearly, allowing to more freely "be creative with yourself". Witnessing how other students made and expressed meaning appeared to stretch self-perceptions and self-appreciation. Consistently, students seemed to recognize that through arts integrated experiences, individuality shined through unique approaches and unexpected mistakes. In that way, mistakes served as defining moments of divergence from the expected, the normal. Students related the act of making something look different as a creative strategy to be expressive and more honest. One student went further, stating that originality is natural and conformity is forced—we all have "different imaginations". Students identified the pressure of funneling toward conformity alongside preconceived notions of perfection—a single right way of being. According to students, arts integrated learning reinforced the importance of openness to different possibilities and approaches in subjects beyond art.

One student observed that participation in arts integration activities was beneficial to both student and teacher motivation, promoting better student-teacher connection, "when [teachers] like typically [can] be real serious and never have anything to say and when they go to arts integration . . . they get more excited and when they come back they are uplifting and not real serious." That observation was shared by several students, suggesting that something about the arts integration experience triggered a more relaxed, natural teaching style that possibly allowed teachers to be more aware of unexpected creative openings. Additionally, for some students, arts integration instilled self-confidence and poise that affected life beyond school, even touching their relationship with their parents.

DISCUSSION

The results of this exploratory study underscored potential mechanisms for the positive effects of high-quality arts integration that past research has found (e.g., Robinson, 2013). Through a grounded theory approach we propose that students' creative engagement in arts integrated academic learning can incorporate inward self-discovery and outward exchange with the world in a reciprocal and reflexive dynamic. As our theoretical underpinnings suggest, students' creative engagement is not only framed by their person-level resources (e.g. motivation, metacognition, creative assets, and artistic skill), but also by the embedded and reciprocal socio-cultural relationships and environmental conditions experienced at school. How students choose to make meaning of their learning and express this meaning may depend largely on the classroom-school ecology, governed by many factors. Here, we put forth a theory that describes (a) learning conditions that support creative engagement and (b) the process of creative engagement experienced by students.

A THEORY OF CREATIVE ENGAGEMENT IN ARTS INTEGRATION

Synthesizing the perspective of dozens of early adolescent learners, a theoretical framework of learning conditions for creative engagement emerges and complements existing research (see Figure 1). Creative engagement, we found, is driven by students' sense of competency, autonomy, and belonging, as well as a need to access personal creative resources in order to make and express unique meaning in learning. The need for competency requires that students develop skills to express themselves in different media, feel confident in their ability to adjust flexibly to different challenges, fail forward in the face of mistakes, and be open-minded to feedback and other perspectives. Students develop emotional and metacognitive responses in learning, seeing mistakes as opportunities not deficiencies—what Immordino-Yang (2015) calls skilled intuitions—that can be transferrable to novel contexts. According to students, arts integration sets conditions to fulfill this primary need for a sense of competency. Believing in one's creative self was important to act on and reveal creative potential—the idea that creative behavior is a matter of agentic action (Beghetto & Karwowski, 2017, Karwowski & Beghetto, 2018).

With a drive toward competency, an early adolescent learner pursues autonomy through the physical, emotional, and cognitive space afforded by arts integration to think, move, and feel through multiple modalities and forms. As emotional involvement seems key to autonomy, learning stimuli must pique interest, curiosity, and enjoyment and the learning environment should provide space and time to reach flow states. Importantly, more "negative" emotions, such as fear or confusion, play a key role in shaping confidence, resiliency, and intention (Anderson & Beard, 2018). Metacognitive awareness in the creative learning

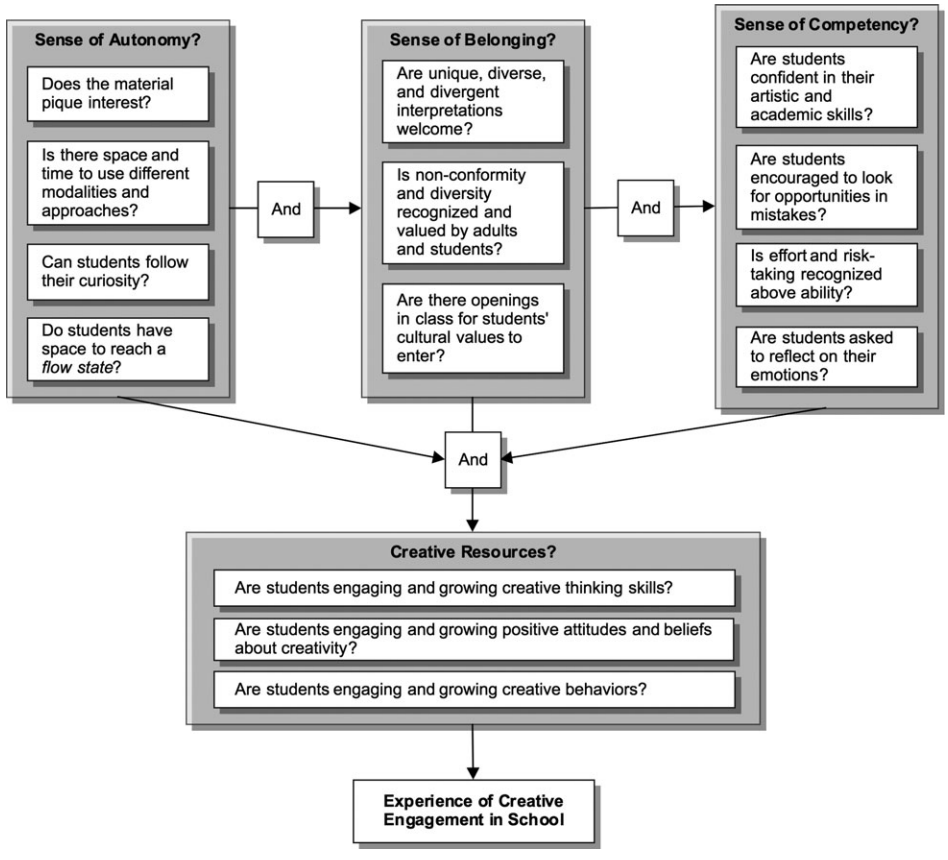

FIGURE 1. Theoretical model of learning conditions for creative engagement in arts integration described by early adolescent learners.

process and situational self-awareness undergirds autonomy, as well. Seemingly, students in early adolescents choose to act on their creative potential or not.

The need for belonging requires that the learner feel welcome to express unique and divergent interpretations with assurance that others will make effort to understand and appreciate different ideas. Learners have opportunities to witness and grow from the creative responses in both their own work and the work of others. In early adolescence, self-awareness and the need for social acceptance become heightened (Dahl, Allen, Wilbrecht, & Suleiman, 2018). As such, creative engagement during this developmental period may depend on environmental conditions that cultivate and sustain a sense of belonging, framed by the unique differences that each learner brings to make meaning in their learning. Students clearly articulated how arts integration supported their creative thinking, behaviors, and attitude to make meaning through body-mind interaction with content, materials, and others in various artistic modalities.

Competency and autonomy as agentic action

Our grounded theory developments support the model of creative behavior as agentic action recently put forth to understand the role of creative self-beliefs in the choice for creative behavior (Karwowski & Beghetto, 2018). Based on findings from three studies, including one with an early adolescent sample, that work suggests creative potential is shaped, to some degree, by an individuals' creative agency—their confidence in, and perceived value of, creativity before becoming creative action. In arts integration experiences, we found that students' perspective tapped deeply into their creative self-beliefs regarding prospective and

retrospective competency—self-efficacy and self-concept—in addition to the perceived autonomy to make choices in learning. Student reflections demonstrated the interrelated roles of sense of autonomy and belonging, clarifying how learning conditions shape how creative self-beliefs form and influence behavior for adolescent learners in a classroom context.

Mapping onto Karwowski and Beghetto's (2018) model, we found engagement linked to students' creative self-beliefs, as well as a sense that creativity was valued in their classroom, manifested through a number of different processes. As the entry point into the second most important developmental period of growth (Dahl et al., 2018), this early adolescent period is primed by self-beliefs, both retrospective and prospective, and the learning environment plays a major role in shaping those beliefs and how students act upon them. Students carry agency to a creative act, and metacognition, self-concept, and self-efficacy all contribute to determining how students will choose to act (Anderson et al., 2018). In adolescence, the conditions for creative engagement illustrated in Figure 1 suggest key leverage points for instruction and the learning environment.

A CLASSROOM FOR CREATIVITY

Students illustrated how the environment played a key role in their creative engagement, reporting a number of learning conditions that can be linked to deeper, more meaningful engagement in the creative process. To reach a level of engagement in which students are emotionally invested and their academic, artistic, and creative potential grows, arts integrated experiences should contain a personally meaningful artistic experience that becomes expressed and shared with others. These conditions related to instructional approaches as well as the social milieu and patterns of interaction—the overarching climate and culture of a classroom and school (Wang & Degol, 2016).

Instructional approaches

Across student experiences, we found three overarching instructional elements—play and embodied learning, student choice, and process-oriented instruction. Classrooms that foster creative engagement prioritize playful tinkering with ideas, material, and process as a meaningful part of learning. Nurturing students' affect toward play can lead to positive outcomes later in life (Russ, 2014). Teachers and schools can create explicit opportunities for experimentation and risk-taking and remain vigilant about the creative openings that may arise unexpectedly, especially when teachers provide open-ended learning prompts (Gajda, Beghetto, & Karwowski, 2017). Teachers can model play by experimenting with learning stimuli and pedagogical techniques themselves, loosening the reins on an expected, homogenous "normal".

In arts integrated learning, simply allowing students to decide on *how* they tackle a challenge and letting them try and fail forward with different strategies and techniques creates a deeper connection, a sense of ownership, and self-acknowledged competency. Productive failures are pivotal to successful art and design, but require that teachers facilitate reflection to understand why mistakes occurred and how to build on failure and move forward (Sawyer, 2018). The ability to operate outside of prescribed directions was a motivator; however, students noted that having some guidelines and explicit skill development was needed, understanding that constraints and domain-specific skill are critical for successful creativity (Kaufman & Beghetto, 2009). Student choice requires teachers' trust and willingness to cultivate micro-opportunities for divergence and self-direction, and can result in a greater sense of agency—building a protective factor for continued engagement in school (Anderson et al., 2018). When students were able to insert themselves into a medium and make low-risk choices, an organic self-feedback loop emerged that created greater flexibility and risk-taking. That process also cultivated personal esthetic, finding beauty in unforeseen discrepancies and challenging conforming notions of perfection.

To take risks in a new domain and in front of an audience, either through performance, group critique, or final exhibition, requires that students have had space and time to experiment free from judgment. Process-oriented activities, such as blind contour drawing or tableaux vivants (Anderson & Beard, 2018), provides that space to explore. Arts integration design should plan and scaffold low-risk opportunities for students to play and express before the stakes increase. The nature of arts integration implies that the artistic process is a means to learning, not necessarily driving toward an end product to be exhibited and judged. The development of positive self-beliefs in early adolescence can serve as a protective factor against disengagement and declining grades later in high school (Anderson et al., 2019). To reach this self-belief, diverse opportunities for creative engagement to try, fail, succeed, and experience the full cycle of growth may be paramount.

Social environment

Learning in some art forms, such as theater (Goldstein & Winner, 2012) can enhance empathy, but integrating that form into a non-art classroom requires deliberate design. Inclusive classroom conditions for openness and trust are key. Beghetto (2007) identified the movement between the inward and outward dimensions as "ideational code-switching" (p. 268). Findings from our study suggest that students need to read the classroom social dynamic as welcoming and supportive to code-switch from their internal creative process to take outward creative risks. Indeed, greater creative flexibility relates strongly to relational support from teachers and peers (Anderson, Pitts, & Smolkowski, 2017). Feeling supported instills a shared vulnerability to exchange personally meaningful ideas and emotions. Additionally, as creative behavior rests on agentic action, a sense of creative valuation across the learning environment may be a key support for creative engagement (Karwowski & Beghetto, 2018). Valuing of diversity and non-conformity appears to be natural for early adolescent learners but needs to be acknowledged and supported by the classroom community.

LIMITATIONS

We included a narrow age range (i.e., 10–12) of students in Grades 6 and 7, which may limit generalizability to this stage of adolescent development. The majority of students attended mid-sized schools (between 350 and 600 students), so the socio-cultural and environmental factors of smaller or larger schools may change how students experience arts integration. Though we included different students at three different time points during their experience of arts integration, this study is not longitudinal in design. We may have been able to explain away some effects that could have resulted from the novelty of the experience, but the results do not inform how creative engagement in arts integration changes across grades. The only sources of data we analyzed were student interview and focus group transcripts; we did not triangulate data with other sources. Because we used a grounded theory approach, validation through triangulation was not a primary goal. Future validation studies are needed with new samples.

CONCLUSION

Early adolescent learners take different paths toward creative engagement in arts integration but depend on a similar set of personal, social, and environmental conditions. The sense of competency may be a critical precondition for most students to feel worthy of expression and open to belonging under supportive conditions. To develop a sense of competency in specific tasks, classes, or school generally, students need low-risk opportunities that invite play and exploration alongside the habits of mind and skilled intuitions that drive their emotions in learning. They need multiple modalities to grasp understanding and represent their own meaning. Filled with a sense of competency and belonging in a classroom, students can act on opportunities for choice and autonomy with a willingness to take risks and make mistakes. A students' autonomy, belonging, and competency underlie the primary need to make meaning through one's own creative process and interpretation in exchange with others. Drawing on emotional, cognitive, social, and esthetic processes, meaning-making drives engagement toward growth. In practice, the integration of artistic processes into the curriculum and instruction of other content can facilitate the conditions for creative engagement. As one student articulated, taking risks to stretch and explore through arts integration helps students to not "hide their creativity". To an early adolescent learner developing within the complexity of middle school, creative engagement is latent with possibility.

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SUPPORTING INFORMATION

Additional supplemental material may be found online in the Supporting Information section at the end of the article:

Appendix S1. Coding phases, codes, and descriptions.

Appendix S2. Codebook.