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# Nurturing Creativity in the Visual Arts Classroom Understanding Teacher Strategies through Amabile's Componential Theory

## Promouvoir la créativité en classe d'arts visuels : comprendre les stratégies d'enseignement par le biais de la théorie componentielle d'Amabile

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### Article abstract

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# Nurturing Creativity in the Visual Arts Classroom: Understanding Teacher Strategies through Amabile's Componential Theory

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**Abstract:** Creative skill-building is a primary focus of educational systems worldwide. In this article, we draw on data from four K-12 visual arts teachers to illustrate pedagogical strategies used to support students' creative development. We adopt Teresa Amabile's *Componential Theory of Creativity* to frame the teachers' approaches to creative skill-building, identifying how they nurtured students' *task motivation*, *domain-specific skills*, and *creativity-relevant processes*. By presenting the teaching strategies in this way, we hope to enable art educators to recognize, shape, and enhance how their teaching can support the development of student creativity in the visual arts classroom.

**Keywords:** creativity; arts education; visual arts; teaching strategies; pedagogy

Since the turn of the century, researchers have highlighted the increasingly dominant role of creativity and the so-called "creative class" in shaping society, particularly from an economic standpoint (e.g., Conference Board of Canada, 2008; Florida, 2002; Nathan et al., 2016). The interest in developing creativity-driven industries and workers has grown so great that schools have placed a premium on fostering creative skills (Sawyer, 2014; 2015). Although creativity can and should be applied within all fields of study, creative development is—and has been for many years—commonly associated with the arts curriculum (Sawyer, 2015; Zimmerman, 2009). Noted scholars in education, such as Elliot Eisner and Howard Gardner, have written extensively on the connections between arts education and human creative capacities. These connections include the ability to imagine, improvise, take risks, and convey visually what cannot be expressed through words (e.g., Eisner, 2002; Gardner, 1990). Arts education not only serves to nurture the creativity of art producers but also the creativity of arts consumers—those who are surrounded and influenced by art in all its forms (Freedman, 2008).

However, tensions have long existed among scholars and practitioners as to how teachers can negotiate the support of students' creative development while adhering to prescribed and structured curriculum requirements (Beghetto et al., 2015; DeLuca, 2010; Hunter-Doniger & Berlinsky, 2017; Sawyer, 2017). Many have argued that the spontaneous creativity associated with young children's artwork is lost when they enter formal schooling and learn to follow these adult-imposed expectations (e.g., Anning, 2002; Gardner, 1982; Rose et al., 2006). Although creative development is certainly expected within arts education, curriculum documents do not

always offer "valid means for identifying creativity, constructs for developing curricula that include creativity, or a research basis upon which to assess creative outcomes" (Zimmerman, 2009, p. 388). Bastos and Zimmerman (2017) further argue that "there is often a gap in connecting creativity research and practice" (p. 387) in arts education. As such, teachers may feel they lack the tools and knowledge to support students' creativity effectively in the classroom. On the other hand, from our own experiences working and discussing teaching practices with colleagues in schools, we believe that many teachers *are*, in fact, effectively nurturing creativity through their daily visual arts teaching strategies. We, therefore, designed this research to learn more about such practices and how teachers—perhaps unconsciously—regularly use them to support student creativity development.

Thus, in this article, we draw on empirical research with visual arts teachers to illustrate how teachers can nurture creative development within the context of K-12 education. We identify and frame the teachers' approaches to nurturing student creativity with Amabile's *componential theory of creativity* (1983; 2012), which is acknowledged as a means to understand what is needed for creativity to emerge (Kaufman & Glăveanu, 2019). In selecting this particular conceptualization of creativity, we hope to offer arts teachers a practical and relevant way to think about and support student creativity in their classrooms. Many of the teaching practices we have detailed here will be very familiar to arts educators. Our purpose with this article is not to reveal and present new strategies but to demonstrate *how* time-honoured art teaching strategies specifically work to support creativity. With this understanding, we hope that art educators will be better positioned to consciously recognize, shape, and enhance how their teaching can support the development of creativity in the visual arts classroom.

### **Amabile's Componential Theory of Creativity**

In the early 1980s, Amabile developed a theory of creativity that recognizes the social and psychological components involved in creative work. She has continued to expand and develop the idea over time (Amabile, 1983; 1988; 1993; 1996; 2012; 2018; Amabile & Mueller, 2008; Amabile & Pillemer, 2012; Amabile & Pratt, 2016). In 2012, Amabile defined creativity as "the production of a novel and appropriate response, product, or solution to an open-ended task" (p. 3). At various points, Amabile has offered variations on this definition, writing in 2018, for example, that creativity is "the production of ideas that are not only novel—different from previous ideas in some way—but also appropriate: useful, valuable, correct, or somehow fitting to the purpose that the individual creator intends" (p. 1). Standard across the definitions is the requirement of both novelty and appropriateness. In recent writing, Amabile theorizes that creativity requires four components. Three are internal to the individual or team: *task motivation*, *domain-specific skills*, and *creativity-relevant processes*. These interacting "intra-individual" components form the basis of creativity, along with the fourth component external to the individual or team—the social or work environment, which can afford meaningful opportunities such as training and support (Amabile, 2012, 2018).

### **Task Motivation**

Motivation to engage in creative tasks is a primary factor in the development of creativity, particularly in the beginning stages of the creative process when a problem presents

itself (Amabile, 2018; Amabile & Pillemer, 2012; Hennessey, 2019). Specifically, intrinsic motivation—that is, the personal interest, passion, or satisfaction derived from a task—has repeatedly been identified as more conducive to creative behaviour than external motivators, such as tangible rewards, verbal validation, or work deadlines (Amabile, 2018; Hennessey, 2019). However, rather than being a hindrance, research suggests that *specific* external motivators can support and work in synergy with intrinsic motivation to enhance creative performance (Amabile, 1993, 2018; Sung & Choi, 2009). Amabile and Pratt (2016) describe enabling "synergistic" extrinsic motivators that do not undermine intrinsic motivation: (a) information (e.g., recognition) that confirms feelings of competence; (b) information (e.g., feedback) that allows people to build competence; (c) information that confirms the value of the work; and (d) rewards such as time or resources that allow people to become more deeply involved in the creative activity. For K-12 students, extrinsic motivators such as these may be particularly helpful in supporting creativity because young people are still developing the self-regulating behaviours necessary to realize the potential of their intrinsic motivations (Amabile, 1993; Cooper & Corpus, 2009; Corpus & Wormington, 2014). Therefore, it behoves teachers to leverage intrinsic and synergistic extrinsic task motivators to support and encourage students' creativity.

### **Domain-Specific Skills**

Amabile (1983) emphasized that the foundation for all creative endeavours within any given field is the set of domain-specific knowledge, technical skills, and experience that can be synthesized to form new possibilities. As she explained, "it is impossible to be creative in nuclear physics unless one knows something (and probably a great deal) about nuclear physics" (1983, p. 363). While this assertion may be dated, Amabile continues to champion its significance (Amabile & Pratt, 2016), supported by empirical research (e.g., Hirst et al., 2009). As Beghetto and colleagues (2015) identify, students must develop skills and acquire knowledge specific to a domain to improve creative performance. Within the field of visual arts, this set of skills might include knowledge of art history, exposure to the different graphic arts, and hands-on skills related to each area (e.g., drawing, sculpting, painting), among others. As individuals accumulate more domain-specific knowledge, "the alternatives available for producing something new" (Amabile, 1983, p. 363) become more abundant and diverse. Domain-specific skills and expertise allow individuals to judge the quality of their creative products concerning what has come before.

### **Creativity-Relevant Processes**

Amabile contends that with appropriate levels of task motivation and domain-specific knowledge, performance on a given task will be adequate and acceptable. However, the push toward creative performance requires that certain "extra" quality that we associate with creative outputs. Amabile breaks down this "something extra" into creativity-relevant processes, a combination of personality traits and cognitive style conducive to problem-solving approaches that lead to novel ideas and solutions. Despite naturally occurring differences in ability and personality, Amabile posits that "creativity-relevant processes also depend on training" (1983, p. 365) and can be explicitly taught. Personality traits that support creativity include self-discipline, independence, perseverance, and a tolerance of ambiguity (Amabile 1983; 2012). "Cognitive

style," which we have re-designated for ease of understanding as "creative thinking," includes breaking free of perceptual and performance "scripts" (i.e., algorithmic steps and standard views), adopting a flexible plan, and exploring different pathways to solutions (Amabile, 1983; 2012).

### **Situating Amabile's Theory Within K-12 Arts Education**

We can conceptualize creativity in several ways depending on the social and cultural context. This understanding can lead to much confusion for teachers regarding fostering and observing student creativity. Kaufman and Glăveanu (2019) helpfully categorize well-known creativity theories according to how they answer core questions about the nature of creativity. For instance, Rhodes' (1961) 4P framework (i.e., Person, Product, Process, and Press) and Glăveanu's (2013) 5A model (i.e., Actors, Audiences, Actions, Artifacts, and Affordances) answer questions about underlying structural relationships and interactions that influence creativity. Csikszentmihalyi's (1996) theory of "flow" (i.e., the pleasure one gets from being wholly absorbed in a creative activity) helps us understand what drives people to create. Amabile's (1983, 2018) componential theory of creativity, according to Kaufman and Glăveanu, provides insight into *what is needed to be creative*. While Amabile has added to and revised the hypothesis since its first iteration, the core components remain consistent. While many creativity scholars have contributed other conceptions of creativity, we focus exclusively on Amabile's theory because it encompasses sufficient breadth and complexity for our purpose. Amabile's approach presents a practical conceptualization that identifies how teachers can support student creativity.

With its emphasis on domain-specific skills and creativity-relevant processes, Amabile's theory also aligns with the many tenets and practices of arts education. For instance, Hetland and colleagues (2007) developed a framework (based on empirical research of visual arts education practices) of eight "studio habits of mind" that can be applied to any learning context to promote creativity. Domain-specific skills are represented within the framework by such habits as *developing craft* (i.e., learning how to use tools and materials) and *understanding art worlds* (i.e., learning the history of an art form and how to interact within an arts community). Similar to Amabile, Hetland (2013) proposed that individuals require a foundation of domain-related knowledge that can then be used to move beyond the norm. Studio habits of mind that promote creativity-relevant processes include *stretching and exploring* (i.e., reaching beyond one's capacities, embracing mistakes, exploring playfully) and *envisioning* (mentally picturing and imagining the steps to make something).

The nurturing of creativity-relevant processes has also been championed by Pavlou (2013). He argued that simply creating art is not enough to foster creativity in art education; students should engage in aesthetic enquiry that includes cognitive and affective capacities, such as embodying, questioning, showing empathy, creating meaning, and reflecting. O'Donoghue (2015) advanced the potential of *making*, in all its forms, a space for new encounters and possibilities. Within this space, teachers can "cultivate an attitude of openness, curiosity, inquiry, delayed judgment, trying and undergoing, becoming and unbecoming, possibility and potentiality" (O'Donoghue, 2015, p. 110). In this sense, arts education fosters the cognitive skills associated with Amabile's theory and creative personality traits such as risk-taking, taking on new perspectives, and embracing the unknown.

Arts teachers who participated in this study had differing worldviews and ways of approaching arts education that builds on or borrows from these and other theoretical understandings. We propose Amabile's theory of creativity can be applied to various arts education practices and provides a lens through which we can understand how creativity emerges within different arts classrooms.

## Method

As a visual artist and visual arts educator (first author) and a composer and music educator (second author), we have long been interested in nurturing student creativity. Working now as teacher educators, we designed this research to understand better how other art teachers support creativity. We hoped to learn about promising classroom-based practices we could pass along to pre-service art educators. We achieved this objective through purposeful sampling (Patton, 2015) and qualitative interviews with Canadian music, drama, visual arts, and dance educators at both elementary and secondary levels. This article focuses on the data provided by four visual arts teachers. We recruited these particular teachers because they had an interest and experience in nurturing creativity and because, together, their teaching spans a range of student age levels:

- **Anna** (all names are pseudonyms) has been a visual arts expert for several years. She worked in the museum and public arts sector before taking on her current job as a visual arts teacher at a small private high school—a position she has held for two years.
- **Bradley** has 25 years of teaching experience in both elementary and post-secondary environments. He teaches visual arts, dance, and drama at an elementary school.
- **Jennifer** has held multiple contracts as a visual arts teacher and is now in her first year as an arts-based history, language arts, and drama teacher at a rural high school.
- **Melanie** has taught visual Art for 12 years in community settings and ten years in elementary and secondary schools. She currently teaches visual art full-time at an urban arts concentration high school.

Anna and Bradley teach in Ontario, while Jennifer and Melanie teach in Quebec. Curriculum documents in both provinces outline the importance of creativity in education and suggest how teachers might foster creativity through visual arts curricula (e.g., Ministère de l'Éducation et Enseignement supérieur, 2001; Ontario Ministry of Education, 2009). Teachers in these provinces are expected to promote the acquisition and development of creative skills in all subjects, including the arts.

## Data Collection & Analysis

We gathered data via 30-45-minute telephone interviews. The semi-structured interviews (Seidman, 2006) invited teachers to reflect on the pedagogical strategies they use to support students' creative development. The questions addressed three areas: general teacher information (e.g., grades taught, years of experience); learning activities (e.g., tasks and assignments, with examples, and how teachers viewed the activities as supporting creativity development); and strategies (if/how teachers clarify how to be creative and product expectations, how teachers enable students to demonstrate creative thinking, examples of feedback teachers provide, and if/how teachers support peer- and self-assessment of creative work). The interviews were audio-

recorded and transcribed, and the transcriptions were sent back to participants for verification and clarification. Our preliminary reading of the transcripts guided us in identifying Amabile's theory as a good fit for making sense of the data. We then analyzed the interviews following Patton's (2015) combined method of deductive and inductive analysis; the data were examined with a particular theory while allowing for new patterns or understandings to emerge. We deductively analyzed the data first by broadly identifying categories and sub-categories of teaching and learning strategies relevant to the components of Amabile's theory of creativity. Subsequently, we inductively coded to identify further sub-categories specific to the art education context through logical association or co-occurrence, ultimately ending up with a framework (represented in Table 1) that summarizes the data and "conveys key themes and processes" (Thomas, 2006, p. 240). Although we remained open to—and indeed actively sought—findings that did *not* fit within Amabile's framework, we found that the framework was sufficiently robust and did not identify any significance to our research purpose.

**Table 1*****Analysis Framework***

<b><i>Deductive Categories</i></b>	<b><i>Deductive Sub-Categories</i></b>	<b><i>Inductive Sub-Categories</i></b>
<b>Task motivation</b>	Intrinsic motivation	Connecting to student interests and experiences
	Extrinsic motivation	Parameters and checklists
<b>Domain-specific skills</b>		Learning process steps Developing hands-on technical skills Making judgments based on acquired knowledge
<b>Creativity-relevant processes</b>	Nurturing creative personality traits	Instilling confidence
	Nurturing creative thinking	Breaking scripts Adopting a flexible plan Exploring pathways

**Boundaries**

The methods of data gathering and analysis limited this study. First, as we only interviewed teachers and did not observe their practices or interview students, the findings represent the teachers' subjective views of what happens in their classrooms. The study was also limited by the specific lens through which we analyzed the teachers' strategies (i.e., Amabile's componential theory of creativity). We recognize that there are numerous ways to understand

and interpret creativity and the teaching of creative skills. For instance, Hunter-Doniger and Berlinsky (2017) chose the lens of Studio Thinking (Hetland et al., 2007) to analyze an artist-in-residence program. We acknowledge that many of the pedagogical practices we described and connected to Amabile's framework may also be understood with similar frameworks. However, we chose Amabile's framework due to its specific focus on creativity and because it fit with our preliminary and ongoing understanding and interpretation of the data. Future research that moves beyond these boundaries would be valuable in further clarifying and expanding understandings of how teachers can nurture student creativity in visual arts learning contexts.

## Findings

In alignment with Amabile's componential theory of creativity (1983; 2012), we categorized the teachers' creativity-nurturing strategies under the headings of task motivation, domain-specific skills, and creativity-relevant processes.

### Task Motivation

To activate the initial and ongoing intrinsic motivation needed to engage students in creative tasks, participating teachers described the strategy of connecting to student interests and experiences. Teachers also put extrinsic motivators in place (e.g., project parameters and checklists to clarify task goals) to support students' intrinsic motivation. Amabile (1993) refers to this combination of types of motivation as *motivational synergy*.

#### *Intrinsic Motivation: Connecting to Student Interests and Experiences*

Despite the different age groups and contexts, all four teachers described the importance of connecting to students' interests and experiences to spark initial and ongoing motivation. They achieved this first and foremost through the selection of meaningful subject matter. In Jennifer's view, this is one of the most vital aspects of the arts curriculum: "Art to me is really a space to explore subject matter, or rather, work through subject matter that is meaningful to you. So, art becomes a tool to unpack." She described using activities such as guided doodling and drawing to allow students to explore their interests, as well as group discussions and post-it note prompts that she inserts in their sketchbooks to provoke students to "make a personal connection" with the material.

Melanie described focusing tasks on graffiti, contemporary art, and graphic design to connect to the school's surrounding urban environment. She added that letting students choose art materials helped them stay engaged, particularly during sketchbook exercises. Without content and material that relate to the students personally, Melanie explained, she risks "having students who are going to sleep in class."

#### *Extrinsic Motivation: Parameters and Checklists*

The teachers we interviewed described several extrinsic motivators that supported and encouraged students' intrinsic interest. For example, teachers set initial parameters. Anna explicitly outlined categories students could choose from for a design (i.e., abstract, flora and fauna, objects, people, places, etc.), while still providing them with a wide range of choices and opportunities to connect with the material on a personal level. In her view, having these categories helps "put boundaries on a project which can serve as enabling constraints to propel creativity." Bradley also sets "limitations" within which students can "figure out creative ways . .



. to make something interesting." For instance, students had to create masks using only cardstock. The limitations of the task were the material and the mask format, which students could then manipulate and interpret as they saw fit.

As another external motivator, teachers clarify project goals. Jennifer collectively creates the plans with her students and uses reflection booklets to provoke them to think about whether or not the goals are being met. Anna leverages checklists to remind students of task objectives, with questions such as, "Is your composition symmetrical or asymmetrical?" or "Do you think your assemblage has unity?"

Seemingly at odds with the use of constraints described here, much creativity literature has made the case that external conditions hinder creativity (e.g., Amabile & Gitomer, 1984; Hennessey, 1989). However, Hennessey recently wrote, "there have also appeared investigations and theoretical pieces challenging the notion that rewards (and other extrinsic constraints such as evaluation) must be seen as detrimental to intrinsic task motivation and creative performance" (2019, p. 375). Acar and colleagues (2019) reviewed 145 empirical studies examining relationships between creativity and constraints to address this issue. The researchers found that individuals, teams, and organizations *benefit* from moderate restrictions—only when regulations are excessive do they stifle creativity. The review identified that a reasonable level of conditions "frames the task as a greater challenge and, in turn, motivates experimentation and risk-taking" (p. 108). Constraints also prompt a mindset "to maximize the creative value generated from available resources, to search for novel combinations using what is at hand, and to think beyond traditional solutions" (pp. 108-9). However, the constraint threshold is too high if constraints "harm the feeling of self-determination" (p. 109).

Therefore, we believe that the constraints described above, such as limiting design choices and materials, and specifying requirements for the creative products, constitute synergistic extrinsic motivators that support and extend students' intrinsic motivation. Parameters and checklists make the projects manageable by focusing creative efforts and guiding progress towards specific task objectives while still affording students the freedom to pursue topics and themes that are personally engaging. s

### **Domain-Specific Skills**

All the teachers interviewed described how they support students in developing domain-specific skills that can lead to or influence creative development. They encourage students to learn process steps, develop hands-on technical skills, and make judgments based on acquired knowledge.

### ***Learning Process Steps***

Visual artworks, even the most novel, often require the maker to have a base knowledge of relatively prescriptive process steps to be able to, say, create a teapot that will not explode in the kiln or construct a sturdy sculpture out of recycled materials. Each teacher described similar domain-specific processes that students learn through their class work. These processes typically involve broad steps, or stages students must follow to complete a project.

Anna provides handouts for each assignment that walk students through the necessary process steps, sometimes with examples from her creative work. During Melanie's introductory presentations, she includes a slide entitled "Getting There,". She explained the stages of the

project from sketchbook work, experimentation, specific knowledge needed (e.g., colour theory) and the logistics of "how you get from Point A to Point B". Melanie emphasized the sketchbook as a place where students can work through these steps at any time.

Learning process steps help students visualize where they want to go and how to get there. However, the teachers did not imply that these rigid steps lead to the same outcome each time. Instead, they are initial "action plans," as Bradley described, that are meant to be tested, challenged, and revised as the project moves forward.

### ***Developing Hands-On Technical Skills***

Embedded within the process steps are opportunities for students to learn critical technical skills that allow them to achieve desired visual effects. The teachers identified two approaches: teacher-led demonstrations and peer-to-peer modelling.

**Teacher-Led Demonstrations.** The teachers spoke of giving technical demonstrations to students at various points throughout a project. At the start of the process, they emphasize the importance of manipulating new materials or using familiar materials in different ways. Bradley, for example, starts with a "quick little demo" of how to influence cardstock at the outset of a mask project. He noted that focusing on technique, rather than explicitly discussing expressiveness or creativity, relieves some of the pressure students might experience. In his view, students' natural creative tendencies will emerge as they work through technical problems.

The teachers all mentioned that as projects progress, they continuously move around the room and give additional demonstrations and clarifications as needed and individually. In all instances, the teachers suggested that teacher-led demonstrations provide the foundational knowledge students "need to learn to be successful on a project" (Anna). It is important to note that if students experience teacher monitoring as "surveillance," it will likely inhibit their creativity (Amabile et al., 1990). Therefore, teachers must ensure that interactions with students as they work are focused on enhancing domain-specific skills and knowledge.

**Peer-to-Peer Modeling.** Teachers commonly encourage peer-to-peer modelling for students to learn hands-on techniques in combination with teacher-led demonstrations. Bradley tells all his students, "You're going to learn more from your classmates than you will from me by watching what they're doing because they're figuring out the same problems you're figuring out." Anna and Melanie explained that when students face a technical problem, they direct them towards other students who have mastered the technique. Melanie noted that this strategy is particularly fruitful when students do not fully grasp her explanation or demonstration. She feels it also helps "ignite creativity within the students" in a way that teacher-led protests might not achieve.

### ***Making Judgments Based on Acquired Knowledge***

Once students have acquired the basic knowledge needed for a project (e.g., art history and theory, technical skills), they can also learn to judge the quality and direction of their artwork. For example, Anna described a project where the students had to enlarge an everyday object in corrugated cardboard to create an aesthetically and technically exciting sculpture. One student proposed to recreate an iPhone and another a deck of playing cards, which, Anna pointed out, would result in simple rectangular forms. Anna, therefore, pushed the students to make judgments on their item selections based on the criteria outlined in class and the cardboard artists

examined at the start of the project. She explained that by having these discussions with students and talking through what they already knew, the students could make more exciting choices for the project.

The teachers described this type of guided reflection and decision-making as ongoing throughout visual arts projects, with guidance offered to students individually and in groups. Like Anna, Bradley described one-on-one conferencing with students to support making decisions about the direction of the work based on what they know about the material's properties and how the materials can be manipulated. Melanie described encouraging her students to offer this kind of guidance to each other. She pushes them to move beyond using simple descriptors (e.g., ugly, nice, cool) by hearkening back to the elements and principles of design and using domain-specific language or any other pertinent knowledge they have learned in class. By using these forms of communication, they offer informed feedback that can propel their peers' work forward. Guiding reflection and decision-making in these ways can nurture creativity by activating students' domain-specific knowledge to help them perceive how they can create appropriate and novel work.

### **Creativity-Relevant Processes**

The nurturing of creativity-relevant processes—the third component of Amabile's model of what is needed for creativity—involved teachers supporting the development of students' creative personality traits and thinking skills.

#### ***Nurturing Creative Personality Traits***

The teaching strategies we have highlighted above work to support creative personality traits. For example, delineating and encouraging students to check their work against project parameters and goals can nurture self-discipline. Teaching students to make judgements based on acquired knowledge and enabling them to access their peers to learn technical skills supports independence. Encouraging students to channel their work towards personal interests supports perseverance. So, too, instills confidence and helps students believe in their ability to be successful. Both Bradley and Jennifer, for instance, explicitly tell their students that they are all creative. "I'm a bit of a cheerleader that way," Bradley explained. He makes a point of helping students see and recognize their creative progress by reminding them of where they started and how they ended up with something "brilliant."

Nurturing personality traits is requisite but insufficient for supporting creativity-relevant processes; teachers also need to help students develop creative thinking.

#### ***Nurturing Creative Thinking***

The teachers we interviewed discussed various ways they support students in developing creative thinking, including breaking scripts, adopting a flexible plan, and exploring different pathways to solutions.

**Breaking scripts.** Analysis of our data revealed strategies the teachers use to push students to think for themselves and challenge procedural and perspectival norms—that is, to break scripts. Although the teachers all require students to follow process “steps” for each project, they put checks in place to ensure that students do not copy each other or the teacher's exemplar. Melanie, for example, explained that she never shares a completed model:

I feared that anytime you would create a demo, especially in an elementary school, you'd have 25 of the same thing because that is their visual reference for them to say, "For it to be successful, it has to look exactly like this." So that's one thing I've rebelled against; I never create a demo. I get them to think for themselves.

Anna established a "no copying" policy with her students. When a student proposed a project design that too closely resembled that of another artist's work, Anna worked with the student to determine which elements (e.g., colour, composition) could be changed in the design to make it her own. Similarly, Bradley urged his students to borrow ideas from him or other students but insisted they "make it their own" and "make it better."

Another way Jennifer and Melanie support students in breaking the script is by permitting them to deviate from project parameters. During the clay project, one of Jennifer's students asked to use another medium entirely. She responded: "As long as you're exploring space and form and you're excited about the content, sure." She believes allowing students to change the assignment is part of creative development. Melanie echoed this idea saying her students are permitted to do something different from the project at hand "as long as it falls within the parameters of the general idea." In both instances, the teachers give students the freedom to break the script and challenge project expectations, with the understanding that they still need to achieve the assignment's broader intentions.

**Adopting a Flexible Plan.** Adopting a flexible action plan allows for new ideas to emerge as artists move through the creative process, reflecting and revising along the way. Bradley emphasizes that strategies can evolve by describing his art-making:

Some artists can plan things out beforehand and execute them; that's how it works.

That's not how I work because I have a vague idea, and then I start working and realize, oh, that was boring, but I have some good stuff happening here and let's follow it.

Melanie described an instance where a student created part of a sculpture, and it collapsed. She reassured the student by saying, "It's absolutely fine. Now you can see that the whole process you didn't necessarily work for what we're trying to do because it was just so oversized." She then worked with the student to devise a new plan of action based on what they had learned from the previous trial.

Jennifer's tactic for promoting flexibility involves giving students the time and space to change their plans. She typically provides two or three classes as an "incubation period" where students talk to each other and engage in guided brainstorming activities. She admitted to taking a long time to complete units because she feels strongly about giving students opportunities to "stew" their ideas.

**Exploring Pathways.** Amabile (1983) has identified an essential aspect of creative thinking as recognising that there is no one way to solve a problem. In alignment with this conception, the teachers we interviewed described regularly encouraging their students to explore multiple pathways to "solving" artistic issues. For example, Anna and Jennifer mentioned prompted drawing activities as a primary tactic to get students thinking about different possibilities. At the start of a clay teapot project, Anna had her students create ten other thumbnail sketches for each part of the teapot body (i.e., lid, body, spout, handle). Before making characters out of clay,

Jennifer used different drawing prompts with her students to help them visualize options (e.g., “female-bodied character with strange hair”).

Hands-on exploration with materials also emerged as a strategy that all the teachers employ for students to consider diverse pathways. Melanie’s students, for instance, are often told to “dig” through the drawers in her classroom to search for possible material solutions, which might result in them making one or several small models before creating their final piece. In all cases, the teachers refrain from offering direct paths for students to follow.

## Discussion

Increasingly, teachers are expected to foster students’ creativity in ways that can be observed and documented. Thinking about creativity as conceptualized by Amabile’s componential model can allow teachers to use teaching and assessment strategies shaped for their contexts that target specific and identifiable components of student creativity.

As illustrated by the teachers in this study, task motivation can be ignited and maintained by connecting the material to students’ interests and leveraging external motivators, such as project parameters and checklists.

Domain-specific knowledge then provides students with the theoretical and technical foundation they need to explore the creative potential of a project and see it through. The teachers we interviewed supported the acquisition of this knowledge by explicitly teaching process steps, teacher- and peer-led technical demonstrations, and encouraging students to make informed judgments of their own and others’ works.

Finally, supporting students’ creativity-relevant processes allows them to discover that “extra something” that makes their artwork unique and compelling. Teachers can support personality traits that influence creativity, such as self-discipline, independence, and perseverance, by designing engaging tasks and helping students develop the skills to complete them independently, then recognizing and celebrating achievement. They can foster creative thinking by encouraging students to break scripts, explore different pathways to solving creative problems, and adopt flexibility in their planning. The teachers in this study demonstrated that “breaking scripts” can be as simple as encouraging students to build on and move beyond what they have seen in others’ works or, more boldly, by allowing them to push past assignment parameters.

Looking across these teacher strategies, we identify that a crucial role of the teacher in supporting student creativity is setting creativity-enabling constraints. DeLuca (2010) describes enabling constraints in arts education as criteria that are helping because they “do not pre-establish processes or products of learning but support the construction of novel ways of connecting and extending ideas” (p. 8). The criteria are simultaneously constraining in that they focus students’ efforts. Informed by Amabile’s theorizing, the enabling constraints of an assignment or activity would ideally inspire task motivation, promote creativity-relevant processes, and encourage student activation and development of domain-specific knowledge and skills. This understanding means setting broad project goals that encourage originality (e.g., creating a work of Art inspired by a personal experience) that are made manageable through specific parameters (e.g., requiring certain elements and principles of design). And are made achievable by learning techniques associated with a particular medium (e.g., learning how to mix paints and manipulate painting tools). Teachers in this study encouraged originality in student

work by allowing them to choose their subject matter from a pool of options, giving them time and space to explore ideas, and adopting flexible work plans. They made projects manageable by setting parameters such as material or size. They made sure students achieved the technical competence needed to complete their tasks through teacher- and peer-led demonstrations and individual exploration.

### **Implementing Amabile's Theory in the Arts Classroom: Tensions and Considerations**

Amabile's theory of creativity has "undergone considerable evolution" (Amabile, 2012, p. 6) since its inception in 1983. Amabile has expanded the idea to align with ongoing discussions and critiques surrounding creativity, particularly as it applies to individuals, organizations, and the workplace (Amabile, 2012). Although the framework is now comprehensive and cross-disciplinary in scope, its application within arts education contexts merits further discussion.

Previously, individuals considered talented in the arts were also commonly perceived as creative (Zimmerman, 2009). Sawyer (2015) argues, however, that it is "overly simplistic to equate arts education with creativity education" (p. 6), contrasting the view that arts education automatically promotes creativity or that the arts are the only realm where students can develop creativity. For instance, a technically skilled student in the arts might not exhibit creativity-relevant processes (e.g., pushing boundaries and being open to the unknown) nor be able to transfer such capacities across domains. Thus, art teachers seeking to nurture creativity must (a) confront any preconceived notions of creativity and creative students concerning technical "talent" and (b) strike a balance between supporting the development of arts- (i.e., domain-) specific skills and creativity-relevant processes.

The latter point relates to what Sawyer (2015) calls *the teaching paradox*, whereby teachers are required to "find the balance between creativity and structure that will optimize student learning" (p. 20). Teachers operate within systems of education that require students to meet specific curricular goals and assessment expectations. Accordingly, teachers may gravitate towards approaches that focus predominantly on domain-specific skills over nurturing creative thinking or traits because they align well with curriculum requirements and enable straightforward assessment opportunities (Kind, de Cosson, Irwin, & Grauer, 2007). We hope that viewing teacher practices through the lens of Amabile's componential theory, as we have done in this study, will alleviate some of the tension teachers experience in negotiating this paradox. By clearly identifying the creativity-relevant processes that teachers can support and assess—alongside domain-specific skills and knowledge—to nurture student creativity while simultaneously moving them forward to curriculum requirements.

### **Conclusion**

Education systems want students to learn to be creative because society needs creative people (Grigorenko, 2019; Sawyer, 2015). Visual arts education, as a familiar realm of creative activity, is well-positioned to support student creative development in schools. This article details how visual arts educators can intentionally leverage particular teaching strategies—many of which they may already use—to nurture creativity through the targeted support of task motivation, domain-specific skills, and creativity-relevant processes.

While the strategies presented are not new, researchers and practitioners may not always describe these approaches as relating to any particular theory of creativity. Eisner (2002), for instance, described similar strategies to those discussed in this article as being the mark of an influential art teacher. These strategies included “the ability to engage students’ imagination” (p. 53), “knowledge of the technical requirements related to the use of materials” (p. 53), and knowing “when to back off and to allow the student to find out for him- or herself” (p. 54). Fleming and colleagues (2016) applied a quality teaching framework to their data analysis in a multi-case study examining strategies to promote imaginative thinking in the art classroom. Similar to the findings of this study, the authors found that teachers “sought a balance between teaching the necessary technical aesthetics of craft and the need to establish environments where students create imaginative worlds” (p. 448). Whether or not specific theories of creativity are applied to visual arts pedagogy, student creative development is typically implied. The teachers we interviewed, for example, mentioned that innovative product is inherent to the art-making process even when creativity is not explicitly discussed in the classroom.

We propose that approaching the nurturing of creativity in alignment with Amabile’s conception of creativity helps teachers support student creative development (through a focus on task motivation and creativity-relevant processes). Also, adhere to prescribed curriculum expectations (focusing on domain-specific skills). We also propose that helping art educators understand creative development in this way can help them nurture students’ creativity in more robust and intentional ways. The understanding may allow teachers, for example, to assess, identify and target specific areas for support. The examples in this article can provide teachers with specific strategies to apply to those areas of need.

We believe visual arts education is the ideal context for teachers to nurture student creativity. We also think arts educators have been helping students develop their creative capacity for a long time. We hope this article will help teachers focus and strengthen the support they provide.

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