



Figure 1. *Big Evil Monster*. The transformation from puppet to monster took several months' time during which there were recurring periods of reflection and revision.

# When is

**N**ot once in 6 years did Robert ever enter the art room empty-handed. A collector of recycled materials, he always arrived for class with a fresh box full of bottle caps, skinny and thick cardboard tubes, film canisters, coffee cans, and the like. He maintained a small storage area on the shelves and shared his bounty with classmates. The biggest excitement came in 5th grade when he reappeared from summer vacation with a squeaky clean bicycle chain. This drew admiration from every child in the class and it was lovingly handled and played with throughout the year. Although nothing was permanently constructed with that chain, it served as a catalyst for the children's creative thinking about what ifs and why nots. Robert is a three-dimensional thinker who finds two-dimensional artmaking tedious and uninteresting. He has always preferred to construct and over the years he has become highly skilled and reflective about his work. *Big Evil Monster*, a sculpture by Robert and his friend, is the result of intrinsic motivation to creatively find and solve an artistic problem (Figure 1).

The title of this article borrows loosely from the philosopher Nelson Goodman (1977), whose classic essay "When is Art" addresses context and symbolic function. The discussion here concerns an entirely different matter: identifying moments when a learner's creativity is sparked in school art programs. The word **creativity** usually enters conversations with students, teachers, parents, and administrators as a generic term for children's overall artistic output. Now school systems are rapidly incorporating 21st-century skills into their curricula, including creativity skills. In order to implement these skills in classrooms, teachers need to know what is and what is not creative work. Recently I was invited to an administrative meeting where curriculum coordinators were asked to develop definitions for inquiry, critical thinking, creative thinking, collaborative problem-solving, and connections. Confident with defining most of these

skills, administrators struggled with an explanation for creativity that would be equally effective for STEM (science, technology, engineering, and math), English language arts, visual art, and music. Zimmerman (2009) notes that school leaders face a dilemma with definitions for creativity; this reflects the controversy among scholars regarding universal definitions and attributes (Sternberg & Lubart, 2008). Others debate whether children's work can be considered creative or if creativity is reserved exclusively for adults who make practical contributions to their field. Nickerson (1999), Rostan (2006), and Zimmerman (2009) support the notion that creativity is not limited exclusively to adults; in education, ideas that are novel to a learner can be considered creative. To facilitate for this, art teachers will need to develop strategies to enhance creative thinking and creative artmaking.

**DIANE B. JAQUITH**

# Creativity?

## Intrinsic Motivation and Autonomy in Children's Artmaking

### Intrinsic Motivation Activates Creativity

Intrinsic motivation should be at the forefront of any conversations about creativity in schools. Research shows that intrinsic motivators such as personal interest and curiosity are closely correlated with creativity (Amabile, 1996; Csikszentmihalyi, 2008; Hetland, Winner, Veenema, & Sheridan, 2007; Runco, 2007). Amabile's explanation of intrinsic motivation states:

We define as *intrinsic* any motivation that arises from the individual's positive reaction to qualities of the task itself: this reaction can be experienced as interest, involvement, curiosity, satisfaction, or positive challenge. (p. 115)

Intrinsic motivation and student interest are central to creative problem finding and solving. In learning environments where self-directed learning and ambiguity are the norm, learners challenge themselves to take risks. The following list highlights some intrinsic motivators:

- Content has personal relevancy
- Preference for and enjoyment of certain art media
- Curiosity
- Divergent thinking through play
- Satisfying a need by making a purposeful object for play or for a gift
- Collaboration or proximity to others with similar interests
- Work that is challenging and personally rewarding

While preparing for *Big Evil Monster*, three personally relevant concepts fueled intrinsic task motivation for the artists: **environmental**, through the use of recycled materials; **social**, through collaborative work; and **cultural**, using a Chinese dragon puppet as inspiration. The boys worked in a domain within which they have high skill level, enabling them to be satisfactorily challenged. They described their work process:

The inspiration for this artwork comes from a giant dragon head that Robert brought into art class. It was brightly colored with a working (moving) puppet mouth and tail. Now it is transformed into a giant monster with arms, legs, and head. We started by making a body and attaching the head with hot glue. We sawed off cardboard tubes to make legs. Then bottles were used for arms, with more tubes. *Big Evil Monster* can even stand on its own!

During preparation, the young artists knew that they would have full autonomy in this work, including choice of media, process, scale, and pace. A combination of artistry and engineering allowed them to meet a challenge, defy gravity, and complete their artwork under their own terms.

### Extrinsic Motivation Can Hinder Creativity

Extrinsic motivating factors influence students' creative output in both positive and negative ways, depending upon how much emphasis they are given in the classroom (Nickerson, 1999). Amabile (1996) offers the following definition for extrinsic motivation:

We define as *extrinsic* any motivation that arises from sources outside of the task itself; these sources include expected evaluation, contracted-for-reward, external directives, or any of several similar sources. (p. 115)

Extrinsic motivators may deter creativity when learners are distracted by control factors or extraneous information (Collins & Amabile, 1999; Runco, 2007). What may seem like time-on-task may actually be a student resorting to a simpler solution to appease perceived pressure from a teacher. The same student might be far more creative if he or she felt autonomy to pursue a problem in his or her own way, not under the constraints of a tight assignment. Among extrinsic motivations that may limit or hinder creativity are:

- Prescriptive step-by-step directions
- Strict teacher expectations, such as assigned seating or no talking when working
- Inflexible deadlines
- Rewards, such as 'free draw' when students can draw whatever they want
- Emphasis on grades
- Competitive atmosphere
- Peer pressure or interference
- Desire to please teachers or parents
- Limits of scheduled time to complete projects
- Inadequate storage for artwork
- Required exhibitions

Art class cannot function effectively without certain constraints and boundaries. Students understand and appreciate knowing what choices are and are not acceptable in terms of artistic practice, content, and behavior. By reviewing this list of extrinsic motivators, teachers can make decisions about what is non-negotiable and where flexibility is possible. Some matters are beyond a teacher's control, such as the number of minutes a class meets and assigning grades. However, teachers may request additional time for learners at critical moments in a creative process. Rewards for early completion of work, such as 'free draw' may elicit undeveloped artwork from those who prefer doing their own drawing rather than another assignment. Instead, each student can be provided with a recycled book in which they can draw, paint, collage, and alter pages. Callie (Figure 2) was able to access her altered book throughout the year and sometimes deferred working on other projects to pursue a page of interest. Even young learners may be aware of time restrictions in school and learn to plan accordingly.

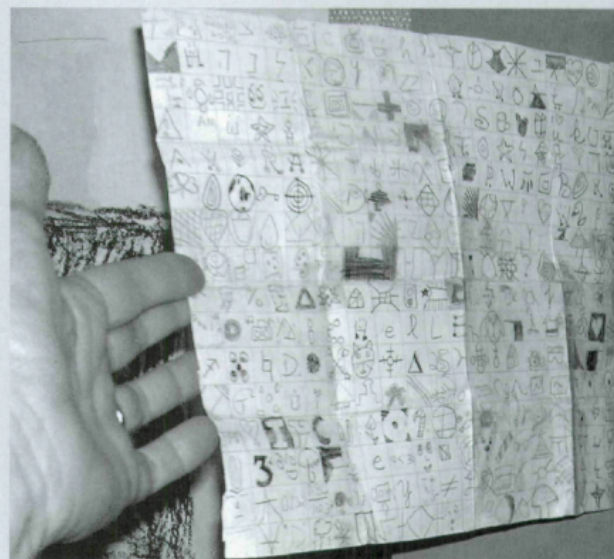
While some extrinsic motivators have potentially harmful effects at the problem identification stages, Collins and Amabile (1999) introduce "synergistic extrinsic

right

Figure 2. This student in grade 5 inserted a special folder into her altered book to keep her collection of collage papers handy.

far right

Figure 3. *Seek and Find* is a two-sided drawing that folds up and becomes a traveling sketchbook.



motivators" that can influence creativity in positive ways. These external motivators work together with intrinsic motivators to keep students on target while persevering through less exciting parts of an art process. For example, when a student is trying to move past a frustrating critical juncture, a synergistic extrinsic motivation such as peer support or a desirable exhibition opportunity may help him or her remain focused despite any perceived failure.

### Problem Finding

Csikszentmihalyi (1996) presents five stages of creativity: *preparation*, becoming curious about ideas or questions; *incubation*, subconsciously making connections; *insight*, when an understanding is realized; *evaluation*, analyzing the worthiness of a problem; and *elaboration*, the physical realization of the idea or question. Under typical constraints of school schedules, the first four stages of problem finding and solving often are compressed, leaving more time for the final stage where artwork is pursued. Some teachers engage learners in discussions that promote divergent thinking toward solving an assigned problem. Other teachers avoid stages of problem finding altogether by assigning a problem to students with no discussion, and students resort to convergent thinking with limited access to creativity in their artmaking. Csikszentmihalyi (2008) believes that problem definition is more challenging than problem solving. Problem

finding can be a lengthy activity; however, when students feel autonomy, much of preparatory thinking can occur outside of an art class.

For example, I observed an 8-year-old girl drawing an intricate grouping of symbols on graph paper. Each square contained a different configuration; she revealed that each shape symbolized a valued aspect of her life. She told me that she had started this activity at home and carried one or more of these drawings folded up in her pocket at all times to entertain herself during free moments. Her *Seek and Find* serial drawings inspired several classmates to do the same (Figure 3). This story exemplifies the fluidity that arises when boundaries between school art and home art are erased. When this learner wants to elaborate on one of her ideas, her *Seek and Find* drawings serve as an immediate resource.

### Learner-Directed Pedagogy and Autonomy

Learners who control their artmaking are guided by intrinsic motivation to find and solve problems of their choosing. Choice-based teaching and learning promotes learner autonomy through arts-based practice focused on multiple studio centers. Teaching for artistic behavior in choice-based settings can sustain intrinsic motivation because students challenge themselves with ideas and art media of personal interest (Douglas & Jaquith, 2009). Self-directed

learning in choice-based art classes can be pursued in a carefully designed structure that promotes independence. This permits an art teacher to function as facilitator, providing instructional support where needed. It is not easy to teach children who are all heading in diverse directions while also facilitating cultural connections and meaning making discussions. Eisner (2002) observes:

To be able to make educational gold out of emerging activities in the classroom requires a high degree of artistry in teaching. Artistry in teaching is more likely to occur when the classroom provides a context for improvisation and where unpredictability, rather than predictability of activities and consequences, is acknowledged. (p. 152)

Jake, a kindergarten student, possessed few of the skills necessary to construct a three-dimensional structure at the beginning of the year. Several classmates had been introduced to construction in preschool and were eager with unbridled independence. Instead of using paper and cardboard for constructing a flat collage, as I had demonstrated, the children immediately charged forward, folding and building upwards. I decided to not intervene when I observed their productive work, peer coaching (unusual in the beginning of kindergarten), and genuine enthusiasm. Jake observed his peers and experimented with construction, first tentatively and later with conviction. After numerous trials, he found an engaging

