

Catalysts for Creativity

Carol Ann Tomlinson

Foster creativity by following four stages and one underlying principle.

When I think about the work my middle schoolers did that cast them most fully in the role of creator and problem solver, the assignments reflected four stages and one principle. I came to understand those stages and that principle only over time and through trial and error. Now, they seem foundational to the kind of work that is a source of self-discovery and pride for students—the kind they remember for decades.

A Process, Not a Moment

We tend to think of creativity as fairy dust, magic, and eureka moments. In fact, it's a process that experts have advised for decades involves four stages: preparation, incubation, illumination, and verification.¹

During the *preparation* stage, my students' work was most compelling when they spent a great deal of time reading, interviewing, and making sense of background information. Students whom I taught for two years spent the better part of both years learning and thinking about the nature of the English language, its history, its oddities, its structure, its various expressions, and the cultures in which it has evolved in the United States. By the end of our two years together, their assignment was to create a language (using an alphabet they created) and culture that reflected what they had come to understand. They developed a history of their invented culture, including (but not limited to) its geography, economy, past and present interactions with other entities, economy, and artistic expressions.

Students had plenty of frameworks, insights, and knowledge to guide their way. As a result, their work was informed, clever, and deep. Absent the serious preparation, the assignment would have made little sense to them and could only have been produced at a surface level. Preparation to the point of saturation matters for creativity, and I learned that even solid students don't often seek saturation. It's a cumbersome and time-consuming endeavor, not the way many young people elect to spend their time. Further, they don't know how to find, process, organize, question, and ultimately synthesize worthy information. Their work improved as I learned how to help them develop those skills.

Once a brain is afloat in background knowledge, students must take time away from the work—to let ideas sift, mingle, and percolate. During the *incubation* stage, my students backed away from the work when they got frustrated, hit a wall, or thought they were finished. Perhaps that meant going for a run, listening to music, or just being a bum for a while. Sometimes, incubation meant playing with ideas or asking, "What if?" This well-documented aspect of creative production generally results in the next phase of the process.

The *illumination* stage is the eureka moment, the aha! It's the time when you suddenly realize your mind has gone somewhere special and has brought an insight back as a souvenir. In my own work, and in that of my students, I've concluded that incubation needs to happen multiple times in a significant undertaking, and that those away-from-the-work times will yield multiple insights. They are not only fruit-bearing in terms of creativity and problem solving, but highly motivating as well. They satisfy a core human need to grow productively.

Creativity doesn't end with illumination. The work still has to be assembled, polished, polished some more, and then tested in the *verification* stage. My students became keen peer reviewers of classmates' products. Most important to the creative process, however, is the verification (or not) that comes from testing a product on a real audience. For instance, a student who was writing code (30 years ago) gave his work to a university professor to try out. Students who wrote children's books took them to elementary classrooms to share with their intended audience. A boy who built a computer from scratch (well before laptops and tablets were even an idea) presented his creation to a local civic club. He was not happy about having to wear a suit to make his presentation (his mom's idea), but he was radiant the following morning. "Ms. T.," he exclaimed, "there were lawyers and business people in that audience, and they thought I'd actually done

something important!" That exclamation was followed by the really big one: "And you know what? They gave me a steak for dinner, and it was free!"

Balancing Choice and Structure

The primary principle that came to guide my mentorship of student creativity was this: Directions and guidelines for student work should contain all the detail necessary to ensure that students understand what success should look like, and everything else is their choice. Even the criteria for success bore the students' hallmarks in many ways. For example, there was a time when I wanted to define an original idea for the language and culture product as one that was not like anyone else's idea in the class. The students revised my guideline ambitiously. The idea, they said, should not be like any idea any student in any of my classes had ever produced. What a difference that revision made.

My voice, combined with their voices, provided structure. Their voices provided the "itch" that they nearly always wanted to scratch.

Endnote

- ¹ Wallas, G. (1926, 2014). *The art of thought*. Kent, England: Solis Press.

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