

# In education, process as important as final product

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By Carolyn Buck

When I took piano lessons many decades ago, I had a teacher whose favorite back to school advice was the well-worn adage, “Practice makes perfect.” My mother repeated that same phrase, and each evening after dinner, she would set the kitchen timer to 30 minutes and send me off to practice scales, chords and my recital pieces.

Somewhere along the way, repeated practice and learning through process became replaced by today’s “benchmark standards” to measure excellence. Never mind the importance of practice, the final product — be it an “A” on a paper or a standing ovation on opening night — became more important than the process of creating the product.

We need a return to the lost art of process in education. There is substantial research quantifying the success of arts students across many academic subjects. The arts require daily practice. The process of rehearsal in dance, theater, vocal and instrumental music requires discipline. With each drill, technique improves, and skills grow more polished.

An experienced colleague of mine who taught visual arts for decades assigned grades not only on the finished works of art in her students’ portfolios, but also on the daily process of caring for the tools necessary in creating art. For decades as an English teacher, I assessed student research papers based on process as well as product. Students received independent grades for crafting a well-written thesis, notes taken along the way, an outline demonstrating a strategic plan and their first draft. By the time the final paper was submitted, it was almost anticlimactic.

The arts and humanities are not the only subjects to benefit from process-based assessments and strategies. I will never forget the algebra teacher who refused to mark a problem correct unless we “showed our work.” He told us to circle our final answer, but without the sequential steps showing the process by which we arrived at each answer, we could forget the idea of receiving a 100 on our weekly Friday algebra tests. (Imagine requiring such sequential logic in today’s world of politics: You can’t vote for a candidate until you show the critical thinking process by which you made your final decision.)

Before the acronym STEM existed, science teachers often began their curriculum with a lesson on scientific method. I have not performed a biology lab assignment since high school, but I still understand the importance in any project of developing a hypothesis, using appropriate materials with care and thrift, strategic methods, mindful observation and evidence-based conclusions.

Perhaps our goal-oriented young people today need our reassurance as they determine the educational process most successful for them. I could never have learned how to drive a car without the patient side-by-side instruction of my driver's ed teacher, supplemented by my father's willingness to allow me to practice using the family car. My own kids mastered the "times tables" in 2nd grade arithmetic by repeating them with my husband.

An insightful assistant principal once commented during exam week at my school, some students have no concept of what the process of studying even looks like. She suggested we teachers consider demonstrating to the students the physical components and characteristics in the process of effective studying. She often did just that in her office, inviting students to sit down with her to "study how to study."

Process prepares learners far beyond classroom walls. As we reflect on those transformative moments that give life meaning, the journey is more than a destination. Daily student attitudes during December midterms deserve the same attention as June graduation day smiles.

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