Got it wrong? Think again. And again.

The best environment for learning is one that forces students to work through a succession of wrong answers and predispositions until they get to real learning.

By Donna L. Miller

Conventional wisdom tells us that without the willingness to take risks — including the risk of failure — nothing of significance would ever be discovered. If learning is about failure, then why in education is an F worse than Hester’s scarlet letter A?

In a felicitous paradox, education researcher Thomas Newkirk explores the pleasures of difficulty, quoting Mike Rose: “Error marks the place where education begins” (2012, p. 118). Achievement levels would...

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rise if more students and teachers believed in the value of error. Students often forget that learning is a gradual process requiring time and effort; for them, understanding doesn’t happen fast enough. They are surprised at their unknowing: “I don’t understand,” they will remark upon their initial encounter with Jonathan Swift’s “A Modest Proposal” or their first attempt at doing a geometric proof. As novices, they don’t yet know that the path to understanding is cluttered, meandering, and protracted; that understanding requires experience, dialectical practice, and intellectual habituation. An appropriate response to such impatience is, “You’re not supposed to understand. Not yet.”

I like the idea of those two words — not yet. They suggest promise and potential. I propose that educators abolish the grades of D and F and replace them with NY — Not Yet. Instead of sending the demoralizing message of reprimand and failure, NY suggests possibility — that given time, patient practice, and application, achievement will come. When a student says, “I don’t get it,” the nurturing “not yet” supports the notion of eventual competence.

Although the human mind resists confusion, this feeling of disequilibrium nurtures learning. Newkirk agrees, saying that intelligence measures derive from one’s ability to work through the initial discomfort of situations that don’t make sense: “Intelligence is not a matter of being smart — it is the capacity to view difficulty as an opportunity to stop, reassess, and employ strategies for making sense of problems” (2012, p. 122). These same habits of mind define reflection, a critical component in learning. A reflective learner is attentive and receptive while skeptical and focusing on meaning making. John Dewey valued this skepticism and considered doubt essential to the thinking process, defining “the attitude of suspended conclusion” as “the most important factor in the training of good mental habits” (1910, p. 13). In his later scholarship, Dewey described reflection as the process of “[looking] back over what has been done so as to extract the net meanings, which are the capital stock for intelligent dealing with further experiences” (1938, p. 87). Such reflection fosters critical thinking.

Normalizing confusion

According to Kelley Wells, “the key to teaching critical thinking effectively is to address doubt management” (2009, p. 218). She describes how doubt, an irritating and uncomfortable state, provokes inquiry or investigation. Because we’re motivated to return to belief — to a state of comfort — we might seek any answer, no matter how suspect, just to end the irritation of doubt.

Thinking is suspect unless we move beyond the levels in the thought process that can be problematic: tenacity (individual will), authority (influence from family, church, peer group, or law), and priority (decision in search of justification or directed toward a predetermined outcome). Once beyond those, we can reach the scientific level, where we actually have evidence to substantiate belief. While doubt starts the process of investigation, doubt can also prematurely shut down inquiry. Therefore, true learning depends on our tolerance threshold, upon how long we can wrestle with doubt.

The path to understanding is cluttered, meandering, and protracted.

Sheridan Blau refers to that same threshold as a “willingness to suspend closure — to entertain problems rather than avoid them” (2003, p. 211). He claims that the major difference between less skilled and more productive learners is not their intelligence, but their willingness to endure disorientation, that feeling of being lost or confused. Because Blau recognizes the role of confusion in developing critical thinking, he proposes the following principle: “Confusion often represents an advanced state of understanding [because] the student who is confused is frequently the one who understands enough to see a problem” (p. 21). Based on this proposition, Blau advocates for curriculum designs that foster confusion: “In a classroom where intellectual problems and confusion are honored as rich occasions for learning, students and teachers will be more inclined to confront and even seek rather than avoid the textual and conceptual problems that offer the richest opportunities for learning” (p. 56).

So, what impedes one’s ability to manage doubt or to welcome confusion? Newkirk says it’s the fear of embarrassment — that doing badly is less risky than admitting inadequacy by asking for help. Regardless of how thoroughly teachers present a lesson, they can’t anticipate and remove every confusion students may experience. Teachers depend on student questions as cues for additional scaffolding, but these questions often don’t come. With their expertise, their polished products of research and training, teachers render confusion implausible. Newkirk claims this “preparation may be a mask hiding the very process we want students to master” (p. 135) — a failure to demonstrate that uncertainty and confusion misrepresents learning. As an antidote, educators might consider modeling the initial false starts that come with learning. We can further normalize difficulty by asking questions like, where did you struggle and how are you working to solve those problems? While these questions may not make un-
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When students instead have a growth mindset, they understand that intelligence can be developed and doesn’t depend on luck or genetics; rather, like a muscle, intelligence grows stronger through exercise. Instead of worrying about how smart they currently are, they work to improve by embracing challenges, persisting in the face of setbacks, learning from constructive criticism, and seeing effort as a path to mastery. They understand that mistakes and confusion will litter their path.

Since failure is not only a part of life but also an essential part of the creative process, perhaps through carefully crafted learning experiences we can discover “the pleasures of difficulty” (Newkirk, p. 118). In realizing that vision, explicitly teaching Wells’ three levels in the thought process, normalizing difficulty through Blau’s principle for fostering confusion, and nurturing the growth mindset described by Dweck offer promise.

While psychologists will probably confirm that we can’t separate ego or completely distill fear from the cognitive process, perhaps we can convey that real learning is about growth and that real growth can be uncomfortable. Learning is hard work, especially when students are urged to question, evaluate, and interpret ideas they’re trying to comprehend for the first time. When engaged in these critical thinking processes, one outcome is certain: Learning can rock the core of previous knowing, causing a shift in balance. The tension between the familiar and the unfamiliar creates a wobble. Because this invitation to change is uncomfortable, the dissonance requires management. The more students confront challenging learning tasks to experience this dissonance, the more likely they are to befriend it as part of the learning process. When learners accept that learning is about transformation and that some discomfort is inevitable, a trip to wobble world will leave them dizzy with new wisdom and experience, not inundated by the sensation of imbalance. No longer worried about failing, learners might let go of the easy answers and find comfort in the questions.

Embracing cognitive dissonance and developing a growth mindset will be especially critical with the implementation of the Common Core State Standards. The standards require students to take intellectual risks and to locate themselves in uncertainty and ambiguity. Because cognitive dissonance has unsettling effects and learning happens in stages, these changes will require time; growth will not occur without error.

References


