

The Toxicity in Learning

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My eyes burst open. My body is shaking and my palms are sweaty. 528—perfect score; 521—the start of the 99th percentile; 516—minimum score needed for top tier medical schools, that is, 129 on all four sections. How do I compare to my peers? To those Ivy League applicants? Everything is a competition, and I need to be perfect. I must be crazy. Two weeks away from the most important test of my life to date, I'm suffering from insomnia.

In fact, I was convinced that I was crazy until I talked to my fellow peers who'd also fallen prey to one of the most demoralizing tests created: the MCAT. Of the fourteen people I talked to, thirteen of them had experienced nightmares and insomnia as the test drew near, and two of them continued to have trouble sleeping weeks after their exam! MCAT PTSD? Surely, that doesn't exist.

Perhaps MCAT PTSD isn't a real disease, but there has been a rise in an obsession with academic perfection that has led to increased suicide rates among students and the development of mental disorders (Duriez). To make matters worse, this preoccupation with scores and perfection is not limited to pre-med candidates. Across all disciplines, there is an unhealthy infatuation with a 4.0 GPA that detracts from true learning.

Many of the skills and materials picked up in school can be integrated in innovative ways to tackle world problems, and it is a student's duty to acquire such skills

Opening paragraphs focus on the emotional trauma of anticipating the MCAT—the Medical College Admission Test.

Jenny Kim, a biochemistry/pre-med major at the University of Texas at Austin, wrote “The Toxicity of Learning” for an Advanced Writing class when she was a junior—contrasting two styles of learning. In a topic proposal, she wrote, “I want to argue the importance of learning as opposed to getting ‘good grades.’ Although there is an overlap between the two, I do believe there is a fine line between going to school to learn and going to school to get a 4.0.”

A thesis contrasts two modes of experiencing college: studying for the test and genuine learning for professional life.

Still in high-school mode, the author learns a painful lesson in her first college lab.

and eventually advance their professions. But that is an impossible feat if students are immersed in a culture that emphasizes short-term memorization and immediate forgetfulness rather than careful analysis and the steady accumulation of knowledge. Unfortunately much of academia has adopted the habit of regurgitation. Despite the ubiquity of this toxic culture, college students should strive to escape it and yearn for something more: an insatiable curiosity and profound understanding of a field they're passionate about.

Recalling high school, I can see why many students are inclined to memorize and forget. Back then, I took all the advanced placement courses and excelled in them. But it was often enough just to memorize definitions and plug numbers into equations. Fast forward a few years. It is my second semester in college and my first in a research lab. I am standing beside four fellow freshmen on our first day. Before this, I'd never been given the opportunity to perform "actual research." The entirety of my lab experiences prior to college were disorganized AP Chemistry labs taught by a clueless but kind microbiology teacher. But that day, the professor running the lab, a researcher/educator, asked us a question regarding the biotechnology used to express antibiotics. My chest tightened. I had no idea what he was talking about, but the terms sounded familiar. True to our high school roots, the four other freshmen and I began blurting out definitions and random facts regarding PCR, bacteria, and selectivity. I had no idea what these concepts meant, much less how they related to one another, but assumed that if I included "buzz words" and science jargon in my answer, I would at least appear smart. I have never been so wrong. All five of us received a long, well-deserved lecture that day, and it was not pleasant.

My desire to appear intelligent would be a classical example of surface motive. According to Dr. Bernardo Lopez, a professor and the vice dean faculty of philosophy and science at the University of Valencia, two

questions arise when a student begins an academic task: “What do I want to accomplish with this? What can I do to accomplish it?” (Lopez). The answers to these questions are divided into two categories: surface and deep. Surface motive and learning are marked by short-term gratification and a lack of scholarly drive, such as my fruitless attempt to impress the professor. Deep motive and learning are characterized by a desire to apply oneself meaningfully at a higher conceptual level, with genuine curiosity for the subject at hand. In other words, it’s the difference between memorizing to get a 4.0 as opposed to learning to build upon a pre-existing knowledge base.

The research of Dr. Lopez comparing deep and surface learning revealed a correlation between deep learning motives/strategies and academic success. In his study, a greater portion of excellent students—defined as those scoring in the 90th percentile on a university-wide exam—were found to use deep strategy and have deep motive when compared to average students. On the other hand, average students were found to use more surface strategy and have more surface motive than their more academically accomplished peers (Lopez).

Now, earning a 4.0 isn’t necessarily bad. However, taking easy college classes just to “boost GPA” is a grand waste of time. The purpose of an education is to become more knowledgeable in an area of interest and develop practical skills to excel in said field. When tempted to take a pointless GPA booster or memorize their way into an A, college students should remind themselves why they’re paying thousands of dollars and spending hundreds of sleepless nights to get an “education.”

That being said, the first steps to escaping the regurgitation culture is for students to pursue a field they’re drawn to and develop a desire to push that field forward. When asked by adults to justify their choice of major, most students mention passion, talent, or interest. But how can that be the case when many students lack a

Kim introduces technical terms to evaluate two contrasting styles of learning: surface motive and deep motive.

Almost by definition, students with deep learning motives succeed in their courses.

Merely going through the motions can earn high grades, but doesn’t produce actual learning.

Mere knowledge does not translate into passion for a subject.

fundamental understanding of their area of study? What makes a good writer, a good biologist, or a good musician? Memorizing procedures and facts surely doesn't. Anyone can learn to read music, given a few days and a book, so what is it that distinguishes a true musician from a biology, English, or even a music major?

As an experienced tutor myself, I know that one of the most frustrating moments of teaching occurs when you realize your student has not learned anything from the past few lessons. There is a fine line between memorizing disconnected fragments and constructing a full roadmap in one's head. This is exactly the problem Dr. Eric Mazur, a physics professor at Harvard University, ran into when he decided to give a conceptual problem to test his students' understanding. When asked about Newton's third law of motion, the students could recite it word for word. However, when it came time to apply the concept, Newton's third law had conveniently transformed into a novel and bewildering idea. He found that very few of his students could even set up a simple quantitative problem based on the principles of the law (Weimer).

What differentiates a musician from a biology or English major, and even a "surface-driven" music major is not the capacity to read music, or the knowledge of when to use a détaché as opposed to a legato bow stroke. The difference lies in the musician's ability to express the distinct personas of different composers, or illustrate the variation within a single composer's work: charming the audience with celebratory birds in Spring then making the audience tremble from the harsh extreme of Winter while maintaining Vivaldi's sprightly sense of style throughout the entirety of *The Four Seasons*. It's only through motivated practice and careful analyses that a music major can consolidate fragments of knowledge into a whole and become an actual musician. Being able to play violin means nothing if the intonation, style,

An elaborate comparison explains the difference between rote learning and the real thing.

tone, volume, rhythm, and phrasing, among other things, aren't present.

There are many college courses in which students can earn an A through sheer memorization or repetition. There are other college courses that will guarantee them an A on their transcript. But, students should remind themselves that they're acquiring an education. Surface motives and strategy may earn them gold stars and a 4.0 on their transcripts, but how will they memorize their way through an open heart surgery, their first novel, or a concert with the New York Symphony? And if that isn't enough to deter students from a toxic obsession with a 4.0, is a perfect GPA worth all those nervous breakdowns and panic attacks? Surely not. Passion for a field is one thing, obsession over scores and competition is another. Weimer offers this advice: "Don't aim for success if you want it; just do what you love and believe in, and it will come naturally." Now, excuse me while I check the average MCAT scores for my top medical schools.

WORKS CITED

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I took vitamins every day for a decade. Then I found out they're useless.

BECCA STANEK