Teaching Stripped Down to Its Essence

Selim Tlili

Teaching, like many modern professions, has suffered from "concept creep." A swarm of demands chips away at our time and our primary mission: we are part-time advisors, administrators, club chairs, and writers of college recommendations, and we have to teach in between all these demands! Turning to teach from home due to COVID-19 stripped away most of those duties that one might consider to be important to the functioning of a school but non-essential from an educational standpoint. The reality of not navigating a shared space and of teaching from home via Zoom forced all of us as a school community to examine what is the core of value that we offer to our students.

The ninth-grade physiology Main Lesson that I developed over the past five years as a Waldorf teacher emphasizes homeostasis and the adaptability of the human body; it explores how neurons strengthen myelin sheathing to allow electrical impulses to travel faster to perform activities that we perform frequently. We talk in class about how muscles grow when they are placed under tension. We explore the concept of the immune system and how exposure to antigens causes our body to adapt. Students generally find my class to be interesting, but ninth graders usually require me to spend a significant amount of time keeping them focused on the class instead of on each other.

In the spring semester of 2020, with classes retreating to the dimensional space of the Zoom platform thus eliminating the immediacy of peers to directly interact with, a student connected the dots in a beautiful way when she said, "Mr. T! It seems like we need to not be, like, totally always safe all the time because it can kinda mess our body up if we don't test it." In the most clear and accessible way that everyone could understand, this student independently discovered the concept of hormesis—the idea that exposure to certain things at low doses can be beneficial, while exposure to higher doses can be harmful. Most years I have had to guide students to that conclusion with a bunch of leading questions that force them to connect the dots, but not this time. The student's well-expressed realization led to a wonderful discussion about the trade-offs between risk and safety and human resilience, a discussion that, in my humble opinion, needs to be had by everyone.

I would write this off as the insight of just one gifted student if I hadn't experienced something similar in my junior botany class that took place the following month. In botany, the focus is on overcoming "plant blindness," a phenomenon that is common in modern society, where we all collectively ignore the uniqueness of plant life. Towards this goal, of regaining our attention to the plants that surround us, students' grades were determined by how many plants they observed and sketched in their botany journal. The students were tasked with looking for and at plant life and asking some key questions:

- What unique physical features do I observe in this plant?
- What do I observe that makes this particular plant as unique as I am?
- How might those features help to either increase the probability of survival or increase fecundity?
- What kind of trade-offs is the plant making to survive in its environment?

These open-ended questions allowed students to hypothesize and make educated guesses based on what they know. Ideally, these questions force students to view plants less as a proverbial sea of green that is simply there and more as a community of unique individuals that are operating symbiotically to grow, compete, thrive, and protect themselves from the vagaries of life and nature. The nature of the questions allowed for various levels of insight and speculation, which depended on the level of work students were willing and able to put into each observation.

Many students and parents wrote to me to report what a gift this class was to them. For the first time in my career, both students and parents expressed genuine appreciation for the kind of work I gave them. By being encouraged to go outside and search for plants, many of the students found the courage to leave the sanctuaries of their home and do some exploring. Some of the students had not gone outside for months out of a vaguely held fear of catching COVID mixed with the uncertainty of what that meant. My botany class gave these students a concrete reason to go outside. Some students kept their mask and gloves on, and some students did not. Either way, once they were outside

and focused on observing plants and capturing those observations in their sketchbook, they found that their fear of COVID mostly dissipated.

One parent of a very quiet student told me how enthused her daughter was about exploring the world around her. The student invited her mother to go on explorations with her—a shocking move given that she was usually rather closed off about school with her family, as is common with adolescents. When the new school year began after a COVID summer, that student sought me so she could report, enthusiastically, about how she spent the whole summer looking at plants and asking herself the questions I posed to the class. The student described herself as "not a science person," but she now decided to take the advanced biology class, partly out of the interest she discovered while exploring the world around her for this Main Lesson. I can't think of a better outcome for a class than to know that it made someone become a little more curious about the surrounding world.

I suspect that the transformed nature of school, where lots of distractions and "noise" have been eliminated from our lives, made its impact. In the COVID semester of learning from home, students were less occupied with peer related drama, stress about college, pesky teachers, clubs and after school commitments, and all the other stresses that come with a full schedule of a city adolescent and the encounters in the school building. I believe that removing these factors from the students' lives allowed them to truly see certain signals that they might have otherwise overlooked in the day to day busyness of school.

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During the summer that followed a trimester of teaching-by-Zoom, I spent a lot of time thinking about how to maintain the positive clarity that less school time has brought to my educational domain. Should we have fewer class sessions? Should we consider fewer class periods in a school day? More time with students will allow for greater depth of content and the fortuitous discussions that can result from their questions. The flip side of the return to in-person classes is the increase of noise in their lives—commute, distraction, multiple interaction—which could hamper their ability to uncover the most valuable insights that comes from silent observation and that can be truly transformative. Like in the lives of the plants that the students explored, there are trade-offs that we need to understand.

Preparing for the new year, I found myself hopeful that the fall plans to spend more class time outdoors will allow students to continue searching for patterns while encouraging greater resilience. With a new academic year beginning with an interesting hybrid of in-person and online learning, I was optimistic about the communal effort to find ways to continue developing the potential strengths that online learning can offer while still taking advantage of the wonderful opportunities that come when people come together in a shared space with a sense of community and a common educational mission.

We began the school year with the botany Main Lesson. Half of the class goes out at 8am to do landscape drawing in Central Park with the art teacher and then, at 9:00, switches roles with the other half of the class for an indoor lesson. When they come into the classroom from the park, the students continue their observations of plant life by placing under the microscope the samples they bring from the park. They then draw cross sections of stems, leaves, roots, and flowers and see how all of these distinct structures cooperate to keep the organism alive. Students who have never once expressed any interest in biology are finding that seeing things is fascinating.

How will this continue for classes in the wintertime? Will student enthusiasm remain when it gets too cold to go outside? It is too early to tell. Regardless of how this continually evolving experiment plays out, I am appreciative of the insights into teaching that I have gleaned from such a vast change in conditions and I'm even more appreciative of the insightful strength I had the privilege to observe in my students.

Selim Tlili *taught in the NYC Department of Education for 11 years before joining the Rudolf Steiner School in New York as a science and math teacher. He earned a Bachelor of Science degree in Biology from SUNY Geneseo as well as a Master's in Public Health from Hunter College. He is currently working on a Master's in Liberal Arts degree, in English Studies, through Harvard University's Extension School.*