

ARTICLES



By Riyam Kafri AbuLaban



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uring my two years at a pharmaceutical company in Ramallah, I was astounded to find that chemistry and biology interns lacked the basic knowledge of their field. A simple dilution calculation required an hour-long revisit to molarity, molality, and dilution. All are basic principles covered in high school chemistry and again during the first year of general chemistry courses that students are required to take as chemistry or biology majors.

In a more recent experience, I had the pleasure of working with a young literature student aspiring to be a writer one day. Working with students, no matter how taxing, is always a pleasure. But here, in addition to pleasure, there was shock and shame at this top student's serious writing discrepancy. The writing was often fragmented and lacked a serious thesis statement. More often than not, the paragraphs were incoherent and the pieces lacked the cohesiveness of a good essay. That being said, I still loved to work with this student. Her lack of skills, if anything, is a reflection on a poor job done by us, the professors.

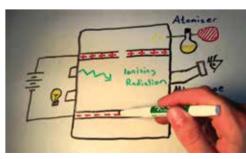
But where are we doing a poor job? Are we not adequately conveying the basic concepts of chemistry to students? Are we not offering practical writing techniques for literature majors? Or are we inflating our assessments and grades so that the interns we work with are C students posing as A students? In other words, Why are universities producing graduates without the basic knowledge of their respective fields? What have we lost?

Somewhere between industrialisation, modernisation, and technological advancement, the love of knowledge for the sake of knowledge was lost. The reasons that students attend university these days have very little to do with a desire to seek knowledge, to find truth, to find

oneself, to find a meaning for life. There has been a shift in status: knowledge is no longer a process but a product. The university is, for the most part, no longer a place where educational development is sought after through a process deemed valuable, honourable, and holy; instead it has become a place in which knowledge is a product, a commodity if you will, picked up (purchased one could sav) by those who pass through the system, and more importantly, by those who can afford it. In Palestine, more often than not. this commodity is acquired for free through endless student strikes to waive, postpone, or reduce university fees.

Furthermore, the character of the knowledge that is disseminated today has departed from all that is philosophical and fundamental. Academics are under pressure to convey knowledge that is viewed as practical and more applicable in the work force and the real world. This practical knowledge focuses more on the end results of theories. postulates, and experiments than on the process of how these theories were put forth, or how these experiments were designed and optimised. In teaching the modern atomic view, for example, almost all textbooks summarise a How much better would the world be if it were populated with fewer technical specialists and more thinkers?

series of experiments that led to our modern view of the atom. Very few mention that these experiments took years to develop and fine tune. A prime example in chemistry is the Millikan oil droplet experiment that led to the calculation of the electronic charge. Students learn the experiment in its final form, with very little emphasis placed on the process that led to the experiment as we know it today, or, for that matter, the controversy surrounding Millikan's calculations. In other words, what we give to students is the product rather than the process. This is then committed to memory with very little historical or theoretical context. To the student, this is just another small compartment of information that must be remembered and successfully reproduced for an exam. Although the results are clearly communicated, what is muted is the passion it takes to pursue an experiment



In Palestine there are very few concrete alternatives to a university education, which results in mandatory bachelor's degrees pursued for the sake of the degree and with very little passion.

with focus and perseverance. We communicate apparatuses, numbers, and results, but we do not transmit passion and determination. We strip the experiment of what it really is, a process, and abbreviate it into a diagram with the shortest legend possible.

The Millikan experiment is followed by the Rutherford thin gold foil experiment. In my opinion, not sharing with the students the process that Rutherford followed to develop the experiment in its final form dilutes the significance of the experiment and fails to communicate the gravity of its key observation. When asked to write intellectually about the impact of Rutherford's experiment on the modern view of the atom. what is often put down on paper is a regurgitation of the textbook. Students cannot connect these experiments intellectually to today's view of an atom. Again, like the efforts of Millikan, Rutherford's hard work, his journey in seeking this knowledge, is lost on students.

Modern society cannot be understood without knowledge. We live in a time that is saturated with all types of information. The university remains the main place where knowledge is created and disseminated. We claim that we communicate operational knowledge rather than fundamental knowledge, which better prepares our graduates to function in the "real world." But if that is really what we're doing, then why do our graduates still face challenges when they perform in the workforce? Perhaps we need to revisit our claim that operational knowledge is the best type of knowledge. Maybe we need to return to the basics in order for students to operate from a place of "know and how" rather than know-how.

In our race to cram our students' brains with information, we have forgotten the scenic route of process. We do not pass on to our students the passion and joy of the actual journey of seeking knowledge, experimenting, and making and correcting mistakes. The satisfaction found in the learning process itself, in solving the mathematical problem rather than finding the correct answer, is not impressed on our students today. In many ways, we are modern day sophists. Sophists, according to Socrates, were not true philosophers but rather shadows of philosophers. They were accused of not teaching truth but rather relying on opinion and popular thought.

In my humble and brief experience in academia, I find students searching for majors that will first and foremost secure them a job, status, and financial stability, rather than majors that they



are passionate about and that offer satisfaction in studying. They are always concerned with how long it will take them to complete a degree. Any suggestion that they might take longer than four years is unacceptable and non-negotiable.

One must admit that Palestinians have become increasingly concerned with time and money making. A young man or woman who even thinks of pursuing a PhD runs the risk of being scorned by the entire family. A PhD, after all, takes a long time to complete and isn't very lucrative. A student once told me that 50 percent of her class have very little respect for PhDs. They do not see the value in the degree and do not understand why people would waste their time pursuing one. PhDs don't even make good money, she announced. Ironically it is those same students who are trying to cram a

Today, I graduated

double major, a concentration, and a minor all into one bachelor's degree and complete it in less than four years. We are so concerned with time. No. I will not pursue a medical degree if it takes me more than six years. I don't care how much better the quality of education is. Maybe I will get a master's, but NO way a PhD. I can't waste time. Time is money, and I need to start making money. These are the notions on which most of our students operate. There are other notions as well. Perhaps the most significant is: I am just getting an education because society tells me I need a degree to hang on a wall somewhere in my house. The concept of university being a place for self-discovery and finding truth is practically non-existent.

To revitalise academia as a journey rather than as an end, we need to re-educate ourselves first, and then our students: university is a

journey to enlightenment. It is a place for free thought, experimentation, and an everwinding road that leads to truth. The main function of teachers is to generate learning in their students based on their own continuous engagement with learning. In other words, we teach our students what we learn. Professors are no different. Our students are products of our own creation, and (let us be honest) we have become iaded. We are bodged down with too many details to marvel at the journey towards truth. Societal pressure to make

money and to be practical, and the view that professors are not practical and have little societal value (yes, this is true. Palestine is suffering from this now) have taken their toll on our professional self-esteem and confidence. Perhaps we are passing on to our students our own prejudice against our lifestyles. Faculty, after all, are human beings involved in the making of other human beings; our emotions, thoughts, fears, achievements, and failures are all communicable attributes that we pass on to the next generation.

The Palestinian context, moreover, has an overbearing effect on education. Universities in Palestine are suffering from severe funding cuts (or rather severe lack of funding, to be more accurate). Academia in particular has been marginalised from one year to the next. Historically, academia and academics have always been a prime target of the Israeli occupation. Examples include the endless closures of universities and schools during the first Intifada, the arrest of faculty members, the attack on students on their way to class, and their arrest and endless detention without a trial.

The Palestinian Authority bears guite a bit of responsibility as well. The educational sector has been shoved to the bottom of the priority list, and decision makers in this sector have shown very little leadership. Innovative projects that dare to push the traditional lines in education take years to become accredited, with very little guidance from authorities.

To add insult to injury, faculty are not paid on time, if at all: students do not pay their university fees; and the academic year is subject to interruptions at any given moment. (I don't mean to sound so dark, but it is sad, isn't it?) The Israeli occupying forces' systematic campus raids hardly leave space for faculty to communicate their own passion about education. (At Al Quds University you spend three out of five days per week trying to avoid suffocation from tear gas.) The discontinuity in the teaching process leaves faculty scrambling for time and worrying about communicating major ideas rather than facilitating detailed discussions in subject matters. The end result is that students more often than not receive mere headlines in their subjects.

Lest this sound too depressing. let me end on this note. There are many sparks of hope to be found in universities. Faculty, individually and collectively, attempt on a daily basis to make the learning process more interesting and rewarding. The majority of us who choose academia as a career are generally dedicated. passionate individuals who believe in teaching as a message and a lifestyle. New programmes with contemporary teaching approaches are popping up in various institutions. The emergence of research-active faculty in a variety of fields – including the basic sciences – in several universities is another example of hope. Palestinians have managed to live on hope for sixty-plus years. Academic institutions have always been a beacon of that hope and development. But for it to be translated into something

concrete, we need fundamental change. a revolution, an academic spring on all levels. Universities need to become national priorities with respect to funding, support, hiring, etc., in order for us to revitalise our knowledgeseeking journey and light the way for our students. It is time that universities fulfil the function that they were founded for: to seek truth, knowledge, and freedom.

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