

Q1. With mass illiteracy and economic upheaval in Pakistan, do we really need universities?

PH: Of course we do. A miserable 4% of the eligible population has access to higher education, far lower as compared to our neighbors, India and Iran. So, although education in our schools and colleges is in terrible shape, we still need more universities. But it is a sick joke to pull universities out of a hat, as we saw repeatedly over the past 7-8 years. Every other week, a new university would sprout from the ground. It was supposed to be “progress”. But there is little to be gained from a department of English where the department’s head cannot speak or write a grammatically correct non-trivial sentence of English; a physics department where the head is confused about the operation of an incandescent light bulb; a mathematics department where graduate students have problems with elementary surds and roots; or a biology department where evolution is thought to be new-fangled and quite unnecessary to teach as part of modern biology. I would plead that we not tolerate further this kind of dangerous fraud that was thrust upon us by the management of the Higher Education Commission under General Pervez Musharraf. New universities should be established only if sufficient intellectual and physical resources are available.

Q2. If the poor quality of teaching staff in universities is such a big problem, what can be done?

PH: As a cardinal principle, the ignorant must not teach the ignorant. The current system has allowed those without adequate subject knowledge to ruin generations of students. I think only 20-30% of those currently employed as university teachers should be allowed to teach. A long-term solution is to create large-scale teacher-training academies in every provincial capital. Established with international help, these academies should bring in the best teachers as master trainers from across the country and from anywhere in the world. A few might be willing to come from western countries in spite of the security situation, but hopefully attractive salaries might be able to lure some from India, Iran, or elsewhere.

This effort must be on the scale of a mega-project, say on the order of a billion dollars over 5 years. As high-quality institutions, they should have a clear philosophy aimed at equipping teachers to teach through concepts rather than rote learning. They should use modern textbooks and emphasize basic principles of pedagogy, grading, and fairness. To be effective, they must be degree-awarding institutions and their degrees properly recognized and rewarded. Else they will not be taken seriously.

Q3. Should political activity in universities be allowed?

Non-violent political activities should be strongly encouraged, not just allowed. So I was shocked and distressed when Quaid-e-Azam University’s vice-chancellor declared that he had refused requests from students to allow Imran Khan – whose politics I strongly disagree with – to speak on campus. I promptly told him that he had done the wrong thing. Let students hear all sides and make up their own minds.

Young people are idealists; in fact, there is no other way for them unless they are brain dead. They naturally dream of what a good society is; a society that is better than what they have inherited from their elders. We must have faith in the young, educated people of our society. So, I feel that student unions must be restored and student representatives be elected by popular vote. How else can Pakistan generate its next generation of political leaders? Are we forever doomed to being ruled by military usurpers and dynastic rulers? Even under the British Raj, there were student unions. Why not now? If students in India can successfully study and become world-renowned professionals, as well as unionize and fully engage in national and international political issues, then surely Pakistani students can do this just as well.

Q4. On the other hand, there was violence on campuses when unions existed. Will that happen again?

PH: One should begin cautiously lest the whole idea flops. Although all unions remain banned, religious extremists still rule many Pakistani campuses. They will surely try to take advantage of the new opportunities offered if the ban is lifted, and will want to impose their extreme views upon the rest of the student body. Also, let’s not forget that secular political parties like the PPP were less than responsible in the 1970’s. Just like the Islamists, they also violated laws and ethical responsibilities for the sake of power. So, there must be a clear code of ethics that specifically abjures physical violence, and specifies immediate penalties, including immediate expulsion of students if these are violated, irrespective of political orientation. Before a full restoration, the government should allow and encourage limited activities such as disaster relief activities, community work, science popularization by students, etc. But this first step must not be the last one, and we must move as rapidly as circumstances allow.

Q5. What can be done to increase the quality of R&D in our universities?

Since “research” is a widely abused term in Pakistan, some careful consideration of its meaning is necessary. Research in any professional field — mathematics or physics, molecular biology or electrical engineering, economics or archaeology — does not have a unique, precise definition. But a tentative, exploratory definition might be that research is the discovery of new and interesting phenomena, creation of concepts that have explanatory or predictive power, making of new and useful inventions and processes, etc. In the world of science, the researcher must certainly do something original, not merely repeat what is already known. Just doing something for the first time is not good enough to qualify as research. So, for example, one does not do meaningful research by gathering all kinds of butterflies and listing the number of blue and yellow ones caught in a particular place at a particular time, etc. Nor does it come from substituting one sample after the other in an imported scientific NMR machine just because “it’s not been done before”.

We must recognize that very few Pakistani universities and their faculty currently have the capacity for real research. Nevertheless, they can still function quite well as knowledge transmitters. For example, some of Pakistan’s elite private universities have good teaching standards although they have few journal publications at this stage of their development. My feeling is that if a university teacher does not have the physical, material, or intellectual resources to do genuine research, it is far better that that person be made to improve his or her pedagogical practices as well as subject understanding. This is better than churning out junk papers, which no one reads, but which our authorities stupidly reward so highly.

Q6. When out job-hunting, Pakistani university graduates find it hard to compete with foreign qualified graduates. Why do you think this is the case?

At the genetic level, Pakistani students are just as good as any other in the world. But if you compare the subject knowledge of an average Pakistani university graduate with that of an average graduate from an average university in the US, the difference is huge. The difference in attitudes towards learning is still starker. Except in certain private elite universities, most students in Pakistani universities are taught to simply memorize facts. There is very little application of the received knowledge. Questioning is punished, not rewarded. On the other hand, those studying in good foreign universities are taught problem-solving skills. This requires internalization of concepts. So, those graduates are valued and ours are not. Let us get rid of the fake nationalist pride that we are just as good as them. We are not. The proof: it is shocking to see how under-represented Pakistanis are in the highly internationalized academic world, or even in high-level technical corporations and organizations.

Of course, Pakistanis do very well as stock brokers, financial analysts, and bankers. But that, at least to me, is not success. I would like to see excellence among Pakistani scientists, engineers, anthropologists, historians, creative designers, and artists. We have 170 million people and yet are almost unknown in these fields. Of course there are honorable exceptions. But exceptions are exceptions.

Q7. What can be done to improve the quality of graduates being churned out by our universities?

Depending upon whether it is the arts or the sciences, there are different answers. Art, literature, music, and sculpture are expressions of creative expression. If we want them, then we must first fight the battle for political, cultural, and personal freedom. Unlike during Pakistan’s formative years, today we see that film, drama, dance, and music are frowned upon within the campuses of most universities. Joyous or artistic expressions are sometimes attacked by student vigilantes who say these activities offend their religious norms. Females are being forced into the burqa by the droves. At Punjab University, the Islami Jamiat-e-Talaba staged violent protests against the establishment of a department of musicology. Even when something low-key was finally established, it had to be located away from the main campus.

As for good science: this needs a scientific mindset and culture. But if you look within science departments, you will see open hostility towards that. Many science teachers consider scientific thinking an alien, imported, western concept. They do not respect the premises which underlie science, nor know its history.

In fact many teachers --- whether actively or implicitly --- work against the idea system of science and its openness. I think the scientific mind is nothing but the questioning mind. It starts to develop naturally when students encounter questions that engage the brain's reasoning and logical capabilities rather than memory capacity. You cannot find answers in any holy book.

The impact of rigid obedience on science education is fatal. I have often seen science being taught in schools as though it was Islamiyat – as something that exists in its final, complete, and ultimate form. Rote memorization dominates even in my university, which is supposed to be Pakistan's best public university. Science teaching is reduced to an absurdity and is nothing but a waste of time because the essence is lost.

Q8. Finally, what are the most immediate reforms needed to improve higher education?

PH: Improving the physical infrastructure of the 1000+ colleges, rather than pampering a few public universities, should be the first priority. Of the available money and effort, the bulk needs to be put towards improving teaching quality at our public universities and colleges. I just don't know of any way other than training teachers in dedicated, specially created, teaching institutions where, at the end, they would be required to show proof through credible examinations that they have learned their subject well enough. It should be like a pilot certification requirement. If you cannot prove that you have basic, undergraduate level knowledge then you should not be allowed to fly an aircraft — or teach, or do research. Also, one should immediately stop the HEC's destructive pay-per-paper practice. This is supposed to reward research, but was a stupid idea to begin with and is responsible for a corruption pandemic and massive plagiarism.