Chapter 3

Education Reform in Pakistan: Challenges and Prospects
Pervez Hoodbhoy

Education can be dangerous. It is very difficult to make it not dangerous. In fact, it is almost impossible. The only way you can prevent education from being dangerous is to try and develop an educational system in which the pupil is exposed to no ideas whatsoever. — Robert Hutchins

The connection between education and human security—defined in a broad sense—is immediate and direct. How future Pakistanis will live, the quality of their lives, the kinds of employment available to them, the political system to be, the manner in which citizens will resolve conflicts between themselves, and the country’s relationship to the global community of nations, will ultimately be determined by the content and quality of their education.

Education also provides a society with its scientists, engineers, managers, technicians, and trained and trainable people. In a world where economies are increasingly based upon the availability of sophisticated skills and a well-informed citizenry, education in rapidly progressing countries is considered a sound investment into the future. Belgium or Holland, for example, have few natural resources but have political and economic power that is disproportionately large. On the other hand, Pakistan’s greatest need—and its single greatest failure—is its tragic failure to educate its citizens. Only 25 percent of the Pakistani workforce is literate, and female literacy in two of the four provinces, Balochistan and North West Frontier Province, is lower than in sub-Saharan Africa. Nevertheless, education remains a low-priority issue for the Pakistani state, evident both from historically low levels of funding and a chronic inability to take major steps towards reform now that funding is likely to increase.

1 See, Harry Ransom Center, The Mike Wallace Interview with Robert Hutchins, July 15, 1958.
What is true today was true nearly six decades ago as well. In fact, one might argue that the origins of the present situation are to be found at that time when the future of the nascent state was being charted out. Unlike Jawaharlal Nehru, Pakistan's founder, Mohammad Ali Jinnah did not put educational and scientific development at the top of his agenda. Education was viewed as just one of several things that the new state would eventually need and no particular vision in this regard was articulated. Indeed, the allocations of the First Five-Year Plan were pitifully small and wholly inadequate for producing universal literacy or a system of proper schools. Insufficient emphasis was given to technical and vocational education.

In subsequent decades, where military spending grew steadily, the blame for a failing school system was all too often put upon inadequate budgets. But this was only part of the problem—there are more fundamental, but less quantifiable, issues of efficiency, purpose, and direction. Unless these are squarely faced, more funding by itself will do little.

As a country that has acquired an image of violence and intolerance, it has been frequently presumed in the international media that the madrassas are the source of Pakistan's increasingly intolerant and violent culture. While this may be a partial contributory factor, the real problem lies in the public school system—which subsequently feeds into the higher education system of colleges and universities.

3.1 ORGANISATIONAL STRUCTURE OF EDUCATION

Analysis requires, at the first step, an understanding of the organisational structure of the education system, its governing mechanisms, and its genesis. In this chapter, these can only be touched upon. Details may be found in reference.³

The Pakistani education system is seven-layered (Table 3.1). The Federal Ministry of Education controls all matters related to education up to the intermediate level as well as colleges, and the Higher Education Commission (HEC) is responsible for universities.⁴

---

³ Nasir Jalil, Ibid.
⁴ 4-year university programmes will fall under the HEC administration rather than the Ministry of Education's.
Table 3.1: Organisational Structure of Pakistani Education

1. Kachi (or nursery)
2. Primary school (grades 1-5)
3. Middle school (grades 6-8)
4. High school (grades 9-10)
5. Intermediate (grades 11-12), located in between school and college
6. College (grades 13-14 in most cases, except for 4-year programs)
7. Universities (15-upwards)

There is little coordination between the Ministry and HEC; indeed, strong institutional rivalries have made it difficult to create new college programmes that would make the college-university transition easier.

Education Statistics: Some idea of the size of education in Pakistan can be obtained from Table 3.2, which draws from a variety of sources. Although the accuracy of the statistical data may be questioned, it does enable a comparison with available global data.

Table 3.2: Education Statistics (from diverse sources\(^5\))

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Score</th>
<th>Global Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average years of schooling of adults:</td>
<td>3.9</td>
<td>75th of 105</td>
</tr>
<tr>
<td>Education spending:</td>
<td>2.3%</td>
<td>102nd of 130</td>
</tr>
<tr>
<td>Female enrolment share - Primary level:</td>
<td>35.9%</td>
<td>176th of 185</td>
</tr>
<tr>
<td>Female enrolment share - Secondary level:</td>
<td>39.5%</td>
<td>153rd of 179</td>
</tr>
<tr>
<td>Literacy - Female:</td>
<td>30.6%</td>
<td>171st of 184</td>
</tr>
<tr>
<td>Literacy - Male:</td>
<td>59.8%</td>
<td>160th of 184</td>
</tr>
<tr>
<td>Literacy - Total population:</td>
<td>45.7%</td>
<td>185th of 202</td>
</tr>
<tr>
<td>Primary school girls out of school:</td>
<td>55%</td>
<td>16th of 109</td>
</tr>
<tr>
<td>Private school enrolment - Primary level:</td>
<td>34.8%</td>
<td>18th of 155</td>
</tr>
<tr>
<td>Private school enrolment - Secondary level:</td>
<td>22.4%</td>
<td>49th of 137</td>
</tr>
<tr>
<td>Progression to secondary level:</td>
<td>94.6%</td>
<td>39th of 101</td>
</tr>
<tr>
<td>Pupils-teacher ratio – primary level:</td>
<td>44.1%</td>
<td>24th of 184</td>
</tr>
<tr>
<td>Pupils-teacher ratio – secondary level:</td>
<td>28.3%</td>
<td>18th of 125</td>
</tr>
<tr>
<td>School enrolment – Primary – Net:</td>
<td>66.2%</td>
<td>127th of 168</td>
</tr>
</tbody>
</table>

\(^5\) This table may be found at http://www.nationmaster.com/country/pk/Education where each entry can be followed to its ultimate origin.
As of 2005, the allocation for education stands around 2.3 percent of the GNP although the amount actually spent is somewhat less than this. In a press conference in October 2005, President General Pervez Musharraf declared that henceforth Pakistan would spend 4 percent of its GNP on education. Even if this actually happens, a good part of the new allocation will have to be spent upon rebuilding the 16,000 schools that were destroyed or heavily damaged by the earthquake of October 8, 2005.

Although current allocations are significantly larger, historically education has been vastly under funded in Pakistan. Social sector expenditure since late 1970s oscillated between 2 to 3 percent. Between 1987-88 and 1990-91 the social expenditure declined from 3.4 percent to 2.8 percent, registering a marginal increase to 2.9 percent in 1993-94. In 1994-95, the total social expenditure increased further to 3.1 percent and to 3.3 percent in 1996-97. Table 3.3 gives the GDP expenditure on social sectors with percentage allocation to education and health. The health sector fared even worse than the education sector. The percentage of the social expenditure on health did not exceed 1.0 percent during the entire “Structural Adjustment” period. In fact, 1.0 percent of the health expenditure in 1987-88 declined to 0.7 percent in 1990-91. Thereafter, it has remained constant in spite of a slight increase in the overall social expenditure. The outlay on education, on the other hand, was 2.2 percent during the period 1991-94, which slightly increased to 2.4 percent during 1994-96. It increased marginally by 0.2 percent for the period 1993-1994. However, by 1998-99, it had once again declined to the level of 2.2 percent of the GNP despite initiation of the Social Action Programme

Table 3.3: Expenditure on Education and Health as a Percentage of GDP

<table>
<thead>
<tr>
<th>Year/Expenditure</th>
<th>Education</th>
<th>Health</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987-88</td>
<td>2.4</td>
<td>1.0</td>
<td>3.4</td>
</tr>
<tr>
<td>1988-89</td>
<td>2.4</td>
<td>1.0</td>
<td>3.4</td>
</tr>
<tr>
<td>1989-90</td>
<td>2.2</td>
<td>0.9</td>
<td>3.1</td>
</tr>
<tr>
<td>1990-91</td>
<td>2.1</td>
<td>0.7</td>
<td>2.8</td>
</tr>
<tr>
<td>1991-92</td>
<td>2.2</td>
<td>0.7</td>
<td>2.9</td>
</tr>
<tr>
<td>1992-93</td>
<td>2.2</td>
<td>0.7</td>
<td>2.9</td>
</tr>
<tr>
<td>1993-94</td>
<td>2.2</td>
<td>0.7</td>
<td>2.9</td>
</tr>
<tr>
<td>1994-95</td>
<td>2.4</td>
<td>0.7</td>
<td>3.1</td>
</tr>
<tr>
<td>1995-96</td>
<td>2.4</td>
<td>0.7</td>
<td>3.1</td>
</tr>
<tr>
<td>1996-97</td>
<td>2.6</td>
<td>0.7</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Overall, the total expenditure on the education sector in the country remained below the UNESCO recommended level of 4 percent of the GNP for developing countries.

3.2 PAKISTAN'S SCHOOL EDUCATION

Fundamental structural problems underlie the delivery mechanism for primary and secondary education in Pakistan. Like in other areas such as health and transportation, these are well known: political and bureaucratic interference, appointments based on considerations other than merit, corruption in awarding contracts, lack of accountability and sound management practices, lack of internationally comparable learning outcome standards, and a virtual absence of cost-efficient and high quality teacher and staff training. Mismanagement and corruption are rampant: it has been variously estimated that between 10 and 20 percent of schools in Pakistan have few or no students (the so-called ghost schools). The consequence of rampant corruption and mismanagement is indicated by the following:

- School teachers have very poor content knowledge. A study in NWFP found that only 6 out of 10 teachers could pass a fifth-grade mathematics exam (compared to the 4 in 10 pass rate among their students).\(^6\)

- When teachers were asked to sit for the same competency test administered to children in Grade-3, there was little difference in the marks scored by female teachers of government and private schools. On the basis of a 50 percent pass mark, 4 female teachers failed in both tests in the 5 districts of the Punjab. When the pass mark was raised to 90 percent, amazingly, 45 males (66 percent) and 147 female teachers (78 percent) failed to pass both tests.\(^7\)

- A survey entitled “Basic Competencies of Children in Pakistan” was undertaken in 1994 by the National Institute of Psychology at Quaid-e-Azam University, Islamabad.\(^8\) The object was to

---

\(^6\) Shahid Kardar and Nadia Khar, “Elusive Search For Quality Education”, *Dawn*, 8 April 2005. Note that primary school teachers often resorted to cheating when they were given a simple test to judge their competence level. One estimate is that 30-40 percent of all students cheat in matriculation examinations using a variety of methods.

\(^7\) Shahid Kardar, “Demand for Education Among Low and Middle Class People in Pakistan” in Hoodbhoy, op cit.

\(^8\) Muhammad Pervez, “Basic Competencies of Children in Pakistan” Survey report by Dr. Mohammad Ajmal National Institute of Psychology, 1994. The survey also found that Punjab and Sindh have
assess the proficiency of 11-12 year old Pakistani children in life-skills knowledge, reading, writing and arithmetic. Typical questions asked in the life-skills part were: “who is the prime-minister of Pakistan,” and “why is it good to use a latrine” Questions were asked in Urdu. The study sampled 2582 children in 180 different locations in Pakistan and included remote areas as well as cities. This survey discovered that Pakistani children are reasonably competent in rote reading, numeracy and arithmetic, writing from dictation, and reading from the Holy Qur’an. But reading with comprehension, life-skills knowledge, and letter writing ability were found to be extremely poor. The quantum of skills absorbed in the average school environment is so limited that a fifth grader does not qualify as being literate according to the international definition of literacy. A comparison between in-school and out-of-school children from classes 1-5 was also made. If real learning had been taking place in the school environment, then there would have been a big difference between the two groups. But, on the whole, the difference was found to be quite marginal. It was observed that out-of-school children are considerably better than in-school children in mental arithmetic! Perhaps the reason is that they have more opportunity to exercise this skill outside school than inside.

- International comparisons are not easily available, but one indication of standards is to compare the best in one country with the best in other countries. To participate in the International Physics Olympiad, Pakistan put considerable effort and money into selecting the best students. All those chosen were from the elite “O” and “A” level streams. But, as of 2005, Pakistani students have rarely won even an honourable mention or a bronze award, although Indian and Iranian students have frequently won gold medals (in various sciences).

3.2.1 Why Does Reform Fail?

It is not immediately obvious why the Pakistani public education system functions so poorly relative to other institutions of Pakistani society—which are arguably much less essential. Defence, the textile industry, power, telecommunications, airlines, roads, railways, irrigation,
etc. provide contrasting examples. Pakistan's armed forces are better trained and equipped than that of most countries; Pakistani textiles do well internationally; its electricity producing organisations may be corrupt but electricity has nevertheless reached tens of thousands of villages and is continuing to reach more. Internet and mobile telephones cover much of the country, Pakistan International Airline is not the world's best airline but its flights are relatively punctual and safe, Pakistan Railways is in bad shape but the trains do run, etc. Pakistan has undeniably made economic progress; the GNP per capita has averaged a steady rise of 5-6 percent yearly for the last twenty years. This may not compare well against growth rates in Korea or Taiwan, but it does put Pakistan well above many Third World countries. People with experience in development work are impressed with the country's economic indicators. But in the same breath they say that they have never seen an educational system as appallingly bad as Pakistan's.

A possible explanation is that the power structure in a given society develops and nurtures those institutions that it needs for its survival, increased prosperity, and future development. Once the need is established there is then a demand for it to be fulfilled. This supposition readily explains why, in spite of general corruption and apathy and all else, Pakistani rulers, civilian and military, have not allowed "vital" institutions responsible for electricity generation, telecommunications, airlines, etc to deteriorate beyond a certain point. If the electricity fails too often or planes crash frequently, somebody will be fired. The chairmen of these organisations may lose their jobs. But no university vice-chancellor has been dismissed because his university has low academic standards.

An indication of the low priority given to education is that traditionally the education ministry is considered the least desirable or important. It is generally the last portfolio to be assigned by a new government. A visit to the ministry in Islamabad will reveal that it is badly kept and its disorganised premises are swamped by parents who come to get their failed children promoted to the next class, and by teachers who want their transfers made or revoked.

To put it bluntly: education is not perceived as a vital or central, need of Pakistani society. It could have been otherwise, given that Pakistan is a military-dominated state. Modern defence requires the use of sophisticated weaponry and hence sophisticated technical manpower. But this is not so because routine skills suffice—Pakistan does not design or manufacture the submarines or planes or radars which lie at the heart of its defence forces.


3.2.2 Ideological Roadblocks

The first page of the Pakistani Ministry of Education website defines the priorities of education in clear terms:

Education and training should enable the citizens of Pakistan to lead their lives according to the teachings of Islam as laid down in the Qur'an and Sunnah and to educate and train them as a true practicing Muslim. To evolve an integrated system of national education by bringing Deeni Madaris and modern schools closer to each stream in curriculum and the contents of education. Nazira Qur'an will be introduced as a compulsory component from grade I-VIII while at secondary level translation of the selected verses from the Holy Qur'an will be offered.

This statement of objectives does not emphasise cultivating civic virtues and producing socially responsible, thoughtful, and well-informed individuals. It does not ask for creating a mindset that can readily accept Pakistan's diversity of religions, languages, and cultures. It pays relatively little attention to what much of the rest of the world considers important: knowing and respecting the law of the land, preserving the environment, paying one's fair share of taxes, assurance of social justice, etc. Instead, it emphasises ritual, tradition, and submission to authority. Proponents of this view of education—who constitute an overwhelming majority in the ministry—argue that becoming a “true practicing Muslim” will automatically endow an individual student with all possible virtues, and hence emphasis on “secular” objectives such as social responsibility is unnecessary.

Public school education today is premised on a belief that repeated sermonising, and strict regimentation of the school environment, will produce moral and patriotic Pakistanis. The basic road-map of education is provided by the school curriculum, and it is here where the roadblocks are in full view. This is evident from the following excerpts from the official curriculum, duly authorised by the Curriculum Wing of the Ministry of Education, Government of Pakistan. According to this document, by the end of Class-V, the child should be able to:

- “Understand Hindu-Muslim differences and the resultant need for Pakistan.” [pg 154]
- “Acknowledge and identify forces that may be working against Pakistan.” [pg 154]
- “Demonstrate by actions a belief in the fear of Allah.” [pg 154]

---

Education Reform in Pakistan

• Understand "India’s evil designs against Pakistan." [pg 154]
• "Make speeches on Jehad and Shahadat" [pg 154]
• "Be safe from rumour mongers who spread false news" [pg 158]
• "Learn the national anthem by heart and recite it in class" [pg 158]
• "Visit police stations" [pg 158]
• "Collect pictures of policemen, soldiers, and National Guards" [pg 158]
• "Demonstrate respect for the leaders of Pakistan" [pg 153]

The Curriculum Wing of the Ministry of Education has also decreed that Pakistani children must learn at least three languages—Urdu, English, Arabic—and often the mother tongue, if different, as well. Arabic has no practical utility in Pakistan and is not understood even by most madrassa students who have been educated there. The current Pakistani curriculum is an awkward attempt to introduce elements of modernity into the 11th century system devised by Nizam-ul-Mulk when he created the madrassa system in Baghdad.

This awkwardness is apparent in the grotesque caricatures that arise when the values of traditional education are used to judge and reward performance in modern subjects. Most Pakistani students are capable of remembering volumes of scientific facts without any significant understanding of principles. Current attempts to introduce secular subjects such as science and computers into madrassas are, therefore, unlikely to achieve very much beyond possibly impressing foreign donors. Here a different philosophy is at work. For madrassa education the notion of human progress carries no meaning. Knowledge is considered a set of unchallengeable, immutable, truths. Teachers see students as empty vessels to be filled up with students. Questioning of precepts and assumptions is not welcomed; the teaching style is authoritarian, punishment common, and problem-solving minimal. This demand for intellectual docility and unquestioning obedience has particularly destructive consequences for science education.¹⁰

Many in Pakistan—and in other Muslim countries—argue that Islam demands of Muslims that they be educated. This may be correct, but knowledge in the modern sense is a problem-solving tool which is not a fact

useful as a survival skill in society rather than something that has to be acquired because of a divine command. So curricula in secular societies change according to changing needs. Internalisation of key concepts is important, memorisation is not.

Those desiring reform in Pakistan invariably concentrate upon improving the delivery mechanism for education. There is little doubt of the need to do this, but technical fixes alone cannot do the job of creating a modern citizenry. Education reform is far more difficult to effect than, say, changing the health, transportation, or banking systems. These do not involve ideological matters at any deep level. But schooling does because teaching the young must deal fundamentally with the self-image of a society, its aspirations, and history. In broad terms, the end goal of modern education is to produce an informed citizenry—one that can make rational choices and tolerate diversity and dissent. It is hard to imagine that this view of education is possible in a society governed increasingly by religious laws. Fundamentally, changing education is a matter of changing values; this is why education reform in Pakistan, in the last analysis, is a political rather than technical issue.

3.2.3 The Political Challenge

The present curriculum dates from nearly a quarter century ago, when late in 1981 the regime of General Zia-ul-Haq used the ministry of education and its Curriculum Wing to launch an ideological assault on a generation of children. It was faithfully transmitted onwards by the governments of Benazir Bhutto and Nawaz Sharif to General Musharraf.

As a consequence of the emphasis on Islamisation of education, for a generation, students in Pakistan have been spending progressively less time on useful skills such as reading and comprehension, creative writing, and science and mathematics. Instead the memorisation of religious materials, or those that were deemed part of Pakistan’s ideology, gained priority. School children learned to chant war songs, and venerate the state, and its armed forces, and the atom bomb. Ideologically imbued materials were not confined to Islamiat and Pakistan Studies courses; they pervaded the entire syllabus, including Science, English, Urdu, Geography, Social Studies, etc. A quick browse

through any bookstore reveals officially prescribed school books that have page after page filled with materials preaching hate, militarism, and intolerance. At the same time, the number of madrassas exploded, growing from less than 3000 before 1979 to about 18,000 today.

The effects have been profound. Militant jihad soon became part of the culture on college and university campuses. Armed groups flourished, setting up offices throughout the country, collecting funds on Friday prayers, and declaring a war without borders.

With time, the system has become more difficult to change and Pakistani rulers—even when they wanted change—became convinced that this was too hard a problem. Eventually, the Pakistani education system came under the spotlight but only because of incidents of international terrorism: the US and Europe wanted something done. Pressures after 9/11 forced Pakistani rulers to pay lip service to the idea of making the curriculum less inclined towards militancy. But street protests by religious forces have successfully deterred General Musharraf’s former minister of education, Zubaida Jalal. After an abortive attempt to remove certain Quranic verses on Jihad from the curriculum, she nervously declared herself to be a fundamentalist on television and announced that school textbooks without such verses would be incomplete. Prime Minister Jamali went yet further and declared that the “ideology of Pakistan” was “the most important thing that students need to learn.”

Given the lack of progress, those familiar with Pakistan’s education landscape were surprised that General Musharraf’s so-called education reforms, and his minister of education, had earned high praise from George W. Bush, Colin Powell, and Condoleezza Rice (who described Ms. Zubeida Jalal as a “wonderful woman”). This may come from naïveté but was more likely part of a bid to prevent Pakistan from becoming the incubator of international terrorism. Thus, since the events of 9/11, the US has led Britain and the EU into pouring hundreds of millions of dollars into Pakistani schools, teacher training, and infrastructural needs.

Seeing that his education minister Zubeida Jalal was under siege from the right, General Musharraf eventually replaced her with the former chief of the ISI, General Javed Ashraf Qazi. Some think that the move may well have been motivated by the hope that Qazi’s close

---

12 A useful compendium of such materials may be found on the following website: <www.adpi.org>.
relationship with pro-Taliban and other jihadi elements in the mid-1990s would give him the authority and credibility to put a less ideological curriculum in place. But it is unclear whether General Qazi is committed to any kind of reform, except that which he has been forced to initiate. A report of the International Crisis Group notes that “In the absence of state support, powerful Islamist groups are undermining the reform initiatives of civil society to create a sustainable, equitable and modernised public education system that educates girls as well as boys. Despite its stated commitments, the Musharraf government appears unwilling to confront a religious lobby that is determined to prevent public education from adopting a more secular outlook.”

General Qazi, at the National Education Conference held in Islamabad in June 2006, declared that Islamic studies will be taught from grade three instead of grade four and the subject will be compulsory up to grade twelve for Muslims, whereas ethics will be compulsory for non-Muslim students. Nevertheless, there are signs of confusion and indecisiveness. At the same meeting, Qazi defended his decision to delete certain Qur’anic references to jihad and, to the astonishment of many, declared that “there was no significant difference between the cultures of Hindus and Muslims because the followers of both the religions belonged to the same region.”

Still more confusion comes from statements of Pakistan’s Prime Minister, Shaukat Aziz, on educational matters. At the National Education Conference, Dr. Javed Ahmed Ghamdi, a prominent religious scholar who pleads moderate causes, recommended that Islamiat (Islamic studies) be introduced as a subject only after Class V. He argued that religious education without formal education from an early age tends to produce religious and sectarian extremists. But Aziz differed with him and said that students should be imparted religious education from the very beginning. “In my personal view both religious and formal education are necessary from the beginning. Religious education ... helps character building,” he said at the concluding ceremony of the conference.

9/11—which led to Pakistan’s abrupt desertion of the Taliban and the slackening of the Kashmir jihad—could also have been used to...

---

15 Ibid.
change the course of education. But General Musharraf's educational curriculum remains largely a copy of General Zia's. Fearful of taking on powerful religious forces, every government has refused to take a revisionist position on the curriculum. What might happen a generation later is of secondary importance for a government that is challenged on many sides and which lacks real legitimacy.

What are the likely consequences on Pakistan's future of continuing with the present curriculum? Two decades of experience suggest a bleak answer. There is little hope of social peace or economic progress in Pakistan. It is impossible to create functioning modern political institutions when a people are turned inwards, their mindset rooted in one place, their culture rigid and sectarian. Democracy will refuse to take roots in Pakistan. It is also impossible to effectively participate in today's globalised economy without a well-educated, scientifically literate, culturally creative populace, except as a source of cheap, unskilled labour or a source of natural resources. Pakistan cannot compete in any of these fields.

3.2.4 Towards Reform: Crucial Action Areas

Underlying any real improvement in education requires that society accept, at least in principle, that education is a vehicle for change and progress rather than a means of simply preserving tradition and culture. A rational restructuring of educational priorities, focusing on the relation of education to employment, will be needed as well. Obviously, this is a long-term programme, but how does one begin? Whatever the full contents of an agenda for reform, action is urgently needed in five crucial areas: curriculum, examinations, textbooks, teacher-training, and school management. Let us examine each in turn.

Curriculum: By an act of parliament (1974), the curriculum for all schools in Pakistan is uniform—all schools in all four provinces, whether Urdu or English medium, must follow it.¹⁷ No deviations are permitted. The legal authority for devising curricula is the Curriculum Wing (CW) of the Federal Ministry of Education, and its decisions cannot be challenged. Over the decades, the role of the CW has been a negative and dangerous one. The curricula devised by its "experts" often have the wrong emphases, contain dated concepts, and do not

¹⁷ The "O" and "A" level schools, follow a separate curriculum and have their examinations set in Britain. The Pakistani Ministry of Education requires that they follow certain guidelines with regard to Pakistan Studies, Islamic Studies, etc.
provide for a relevant and useful education. Indeed, the CW appears preoccupied with the propagation of ideological doctrines rather than the proper education of children.

For progress, the CW must be dissolved and curriculum development be made independent of the Federal Education Ministry. One possibility is to entrust this work to certain of the country’s universities. In doing so, Pakistan will not be doing anything out of the way. In Britain, universities such as Cambridge, Oxford, and London, design curricula for school-leaving examinations. There are numerous other models: in the United States, every school is free to have its own curricula but college entrance examinations (the Scholastic Aptitude Test) enforce some standardisation of learning. India and Iran also have no national curriculum. With so many countries having demonstrated that they can exist and prosper without a national curriculum, there is no reason why Pakistan must be fixated upon having one. A revised act needs to be presented to parliament which breaks the monopoly of the CW and allows a choice of curricula.

But the problem is deeper than the existence of the CW. The truth provokes fear—senior members of the establishment defend the necessity of indoctrination through textbooks by arguing that if they are told the truth, many Pakistani children will question the very existence of Pakistan. In 2003, a resolution moved in the Pakistan Philosophical Congress against propaganda and indoctrination in textbooks was soundly defeated because apparently the “philosophers” also believe that telling the truth is dangerous. But without coming to terms with epic disasters such as Partition, the 1965 war with India, the separation of East Pakistan, the failure of democratic politics and the seemingly endless military regimes, Pakistan will be haunted in perpetuity by these demons of the past. Nations that lie to themselves can never be secure.

Textbooks: Sheer volume makes textbook publishing highly lucrative. Textbook boards in Punjab and Sind, together with their favoured authors, make huge profits in spite of often publishing badly written books that have frequent conceptual, pedagogical, and printing mistakes. That their monopoly, under the protection of the state, should have been tolerated for so long is tragic. The good news is that there has been some movement on this issue—in principle the government has agreed to let private publishers compete and allow multiple textbooks to be used. The bad news is that the CW still oversees the
selection of books, and does not offer open and free competition on the basis of prepared manuscripts.

Examinations: Pakistani education is strongly examination driven: examinations provide the incentive to study. But with cheating in examinations, and continuing emphasis on rote memorisation, the examination system has become corrupt and dysfunctional. The results of examinations today are poor indicators of student performance and learning.

The Boards of Intermediate and Secondary Education (BISEs) are directly responsible for this state of affairs. There is a Federal Board, controlled by the federal ministry of education, and 22 provincial boards. The BISEs have substantial assets and income, and some have constructed large buildings with money obtained from examination fees.

The “A” and “O” level schools in Pakistan, linked to examination boards in Cambridge and London, are now the only private schools that can be reasonably said to impart quality education. The assurance of quality is provided by the fact that students must measure up to the yardstick that the overseas boards provide. But, the very fact that the examination authority is located in a foreign country is a serious disadvantage. National pride is hurt and examination fees are much higher.

Pakistan needs an indigenous “A” and “O” level system, with similar standards but with changes appropriate to Pakistan conditions. This new system, which should continue in parallel with the present ones, would have to be recognised by the Government as better than, or equivalent to, the matriculation certificate currently awarded by the 24 BISEs in the country. The advantages accruing from the Independent Examination Board could be considerable:

- The certificate would be awarded by a Pakistani organisation. Hence, there would be no stigma of association with a foreign country.
- The examination fees would be lower and more affordable than “A” or “O” levels.
- The BISEs would be forced to raise standards because they would appear so bad in comparison.

Ideally, it should be for the government to organise better quality examination boards. Unfortunately, the continuing inability of the
National Education Testing Service (NETS) to make progress suggests that it may not be possible for the government to fulfill even this responsibility. Hence, an Independent Examination Board may have to be part of a citizens' initiative as well.

A step in the right direction was taken when General Musharraf signed an executive order (the Presidential Ordinance of November 8, 2002; CXIV/2002) inducting the Agha Khan University Examination Board (AKUEB) into the national education system. When fully operational, this will raise standards in the few hundred schools that will eventually be associated with it. But approval of this private board has provoked street demonstrations, with the Jamaat-e-Islami accusing the AKUEB of possessing a secret agenda to “secularise Pakistan and uproot it from its moral foundations.”

Teachers Training: As a very rough guess, there are probably no more than a few hundred science teachers in all Pakistani schools combined who understand what they teach, and can be, therefore, considered proper teachers. Teachers’ training is a disaster area, and any planner’s first more should be to invest massively in teacher training. However, government control and administration of teacher training institutions is bound to lead to familiar results. Therefore, teacher training should be carried, with the help of strong government subsidies, in private institutions. The Teachers Resource Centre, Ali Institute of Education, and Institute for Educational Development provide fine examples of how teachers can be trained well in institutions run by dedicated, professionals. But their efforts are but a drop in the bucket. Many more institutions like them are needed. Similarly, private universities should also be encouraged to come up with similar training programmes.

Quite correctly, teacher training has been a central part of USAID assistance towards improving Pakistani education. As part of ESRA (Education Sector Reform Assistance), USAID graduated 3026 primary teachers and 735 head teachers.18 Scarcity of master trainers and resistance to change among teachers were noted as the principal difficulties encountered. The difficulty of finding suitable master trainers is more acute at higher levels. Extensive use of video programmes, which cover the science syllabi up to the matriculation level, could be a partial solution. The development of such materials should be given high priority.

School Management: Community and private non-profit, and private for-profit schools, are far more efficient delivery vehicles for quality education. Hence a national policy should seek to maximise reliance and provide encouragement to such institutions. One should consider gradual and selective transfer of the administration of government schools—without surrendering property rights to the buildings—to private parties with demonstrated competence and experience. These parties could be community representatives or bodies, NGOs, school principals or academics with management experience, etc. The contract would require the interested party to infuse a certain amount of capital and to submit a work-plan for improvement of the school. Penalties for non-compliance should be made explicit. The basic contract would require renewal after, say, 5 years. The new school administration would have the right to hire and fire teachers and collect fees from students. Since the local urban or rural community would be the principal gainers/losers in such a change, their input into the selection of the new administration would be imperative. The government should play the role of a monitoring agency to assure adherence to basic norms and the conditions of the contract.

Community participation is the key ingredient to success, and NGOs have a vital role to play in bringing education to the people. The Agha Khan Rural Support Programme in the Northern Areas has touched the lives of tens of thousands of children. Community and home schools are being run successfully all over the country at much lower cost per student than government schools. Correctly, there are hundreds of other private, large-scale, non-profit, initiatives in education. The quality of management and care given to organisational matters in private schools is generally much superior to that in government schools.

With the state's administrative apparatus having become unwieldy, inefficient, and corrupt, parents have turned towards private schools. The Beaconhouse Public School System, an expanding chain of over 120 schools and nearly 80,000, students is notable among these. But it is only the upper-middle class and the rich who can afford to send children to such moderately good schools where fees range from a minimum of Rs. 1000 per month to Rs. 6000 per month and upwards. But privatisation immediately brings up the question of social inequity. While private schools are generally better in quality, there can be little doubt that they perpetuate and promote class differences. According to
one estimate, only 1 percent of Pakistani pupils pay over Rs. 500 per month while 52 percent pay less than Rs. 10 per month. The differences are simply enormous. How then are the demands of quality and equity to be simultaneously fulfilled in a situation such as the above?

Strategies can be designed so that privatisation of school administration produces a relatively greater degree of equity than at present, or at least does not increase it. For example, the government could provide full and partial scholarships in each school for fixed percentages of students. In poor rural areas, one might even demand scholarships for 100 percent of students, but in a school located in Defence Society, Karachi, this could be 5 percent. The criterion for award should be merit and need.

Another alternative is a voucher system—students could be given vouchers which enable them to study at the school of their choice. The voucher would have no cash value and so could not be sold. The school where it is deposited, however, would then claim value from the state and be compensated according to a fixed rate.

3.3 PAKISTANI HIGHER EDUCATION

Universities are key institutions of the modern world, the cradles of knowledge in its many diverse forms, and the fountainheads of modern science. This science has produced technologies that have changed the world more in the past two hundred years than the previous two thousand years. But universities are not magic boxes that just churn out new science and technology. Reforming Pakistan’s universities requires, at the outset, a clear vision of the purposes such institutions must have.

3.3.1 What is a University?

Universities are dynamic and complex organisations, whose building blocks are the faculty, students, administration, and physical infrastructure. The purpose of a modern university is to effect the transmission of existing knowledge, create new knowledge, and generate employment skills needed for a modern economy. Its organising principle is that of a self-governing community of scholars engaged in free inquiry, discovery, and teaching.

Let us disaggregate and consider each function of a university in turn.
Research function: Modern universities treasure critical inquiry and regard it as the basis of all scholarship. The results of research are published in journals that exercise rigorous standards of scholarship. Citations of published work by other scholars provide the most important estimation of an individual scholar's achievement in research. Unimportant work may sometimes also be published, but is never (or rarely) cited.

Economic function: Universities produce a large fraction of the technical knowledge essential for the production of goods and services. The economies of modern states are essentially knowledge based. Universities prepare not just philosophers and mathematicians, but also engineers, doctors, economists, business managers, and other professionals needed to fulfill the stringent demands of technological development and management.

Social function: Universities create an informed and knowledgeable citizenry capable of responsible, reasoned, decision-making. Broadly speaking, they help to create thinking minds, organise and initiate research in subjects that are important but are not of immediate economic utility, create discourses on social and political issues, and raise the cultural and aesthetic levels of a community. Whereas the Soviet and Chinese models concentrated largely on utilitarian goals, western universities—or at least the better ones among them—were able to successfully create a balance between scholarship and more direct needs.

Whether the subject of study is science, engineering, economics, literature, or any other discipline, high quality of instruction is crucial. A person in possession of a good degree is expected to thoroughly understand, and to be able to apply over a lifetime, those principles learned at lower rungs of the educational ladder. Ideally a graduate should be capable of scientific inquiry, be able to reason mathematically, should possess the capacity to organise one's thought in a logical way, have an understanding of culture and history, and be capable of coherent expression in speech and writing.

The key point that makes a graduate valuable in a modern society is adaptability. A broad range of interests and knowledge makes it possible for one to find a niche in academia, industry, or elsewhere. A mind well-trained in any discipline develops habits and attitudes of critical reasoning. These habits, learned in one environment, can be
equally valuable in another. Educational quality is the key. Surveys show that two-thirds of all US PhDs in physics now work in areas very different from that in which they did their theses. Fresh PhDs in theoretical physics from leading US universities are eagerly sought as analysts by firms on Wall Street and offered starting salaries at par with, or better than, those offered to MBAs.

3.3.2 The Pakistani Situation

In 1947, Pakistan had only one university (Punjab University). Fifty years later, in 1997, it had 24. In just eight years this number increased to 51. State funding for higher education (at the expense of school education) increased, between 2002 and 2006, by a factor of fifteen—probably setting some kind of world record for the highest rate of budgetary expansion. Nevertheless, enrollment in higher education amounts to only 2.7 percent of the eligible population in the college/university age bracket. There are approximately 160,000 students enrolled in public universities, perhaps a third as many in private universities, and approximately 600,000 in colleges.

Over a period of 10 years, the number of private universities has increased from just two to around sixty in 2006. These fall into different categories. The best among them (Lahore University of Management Sciences, Agha Khan Medical University, Ghulam Ishaq Khan Institute) are reputed for their good quality of teaching, reasonable infrastructural facilities, and have student bodies that come from an income group that is higher than in public sector universities. As yet private universities do not have graduate departments, and research is rare. Both LUMS and AKU now have plans for setting up science departments that would bring in faculty capable of original research.

3.3.3 Identifying the Problem

While lamenting the obviously poor quality of Pakistani universities, officialdom invariably chooses to focus on the small number of research papers published or the small number of PhDs produced, the paucity of equipment and facilities and frequent incidences of violence. But the problem is considerably more serious because public sector universities in Pakistan are characterised by extreme poverty of scholarship, intellectual timidity, irrelevance to societal needs, and frequent physical violence.
The teaching environment is authoritarian and reflects the experience of teachers when they were students in public schools. Teachers wield enormous power and the right of students to appeal against unfair marking is highly restricted. A few teachers take classes regularly and complete their courses by the end of the teaching period, but these are exceptions rather than the rule. Incompetent and insecure teachers discourage students from asking questions in class. Most teachers never consult a textbook, choosing to dictate from notes they saved from the time when they were students in the same department.

The exceptionally low quality of most teachers in Pakistani universities has a plausible explanation: In the mid-1970s, a rapid expansion in the number of universities led to the sudden availability of faculty jobs. Low levels of school and college education and unattractive working conditions ensured that only those who could not make it to professions like engineering and medicine became teachers. The rules for faculty appointment and terms of service are those of a bureaucracy. Promotions are time-bound and automatic; incompetence is a minor sin, if that at all. It is impossible for anyone to be fired for incompetence or laziness—and there does not seem to be a single example of a dismissal for such reasons.

Rote learning, even in the sciences, is the rule rather than the exception. A generation of students has been brought up to be unquestioningly obedient, uncritically respectful and taught to efficiently memorise and reproduce information. Students dutifully copy down what the teacher dictates—mistakes and all—and then transfer whatever they have copied on to exam sheets at a later time. Many students write the supposedly magical inscription “786” on their examination sheets in the hope of securing better grades, others spend long hours praying before examinations.

The ethical environment is remarkably tolerant of practices that would elicit high censure and punishment in other parts of the world. Cheating in examinations, plagiarisation of research papers or projects, multiple publications of slightly different versions of the same paper in different research journals, fabricating scientific data, seeking out third-rate foreign journals with only token referees, forgery of PhD thesis evaluations by students and their supervisors, and other such acts of academic dishonesty are not considered crimes. Even when the

---

19 Shahid Kardar and Nadia Khar, op. cit.
proof is incontrovertible, those who commit such acts are almost never punished. Nor do they lose face socially. The manifest increase in religiosity on campuses has evidently not led to ethical behaviour.

The intellectual environment is almost empty of intellectual discourse and argumentation. Quaid-e-Azam University in Islamabad, considered Pakistan's premier public university, has three mosques but no bookstore. In 2006, work began on a fourth mosque. Academic activities, common in good universities around the world, are noticeably absent. Seminars and colloquia, where the results of on-going research are presented for peer review, are few and far between. Public lectures, debates, or discussions of contemporary scientific, cultural, or political issues are almost non-existent. The university faculty is more concerned with money and promotions than research, teaching, or bringing knowledge to bear on the myriad issues facing society. Intelligence agencies monitor staff and students for "anti-state activities"—deputed agents often do not bother to hide their identities. Because university administrations forbid discussion on anything that might be considered remotely controversial, all such events are held in hotels and other venues outside of the university.

Campus notice boards are almost, or totally, empty of announcements for academic seminars or colloquia. Most of the notices posted are those of religious gatherings and sayings of the Holy Prophet. Until the government backtracked on “Jihad” after 11 September 2001, large banners invited students to participate in the Kashmiri “Jihad”. Following the U-turn in Pakistan’s foreign policy, these disappeared.

The academic research environment is impoverished. At a rough estimation, the number of computer scientists in Pakistan who might be able to run for a tenure-track position at some B-grade (or better) US or British university is less than twenty. In physics, even if one roped in every competent physicist in the country, this would be insufficient for staffing a single good department of physics. As for mathematics—

---

20 Every university abounds with examples of unpunished academic crimes: recently at QAU, the chairman of the biology department was discovered to have forged the referee reports on a thesis written under his supervision. The university administration refused to penalize him. When the scandal reached the press, he merely took retirement and became Dean of Science at Hazara University.

21 The physics department at Quaid-e-Azam University started with an excellent initial momentum and produced world-class research in the area of high energy physics, reaching its peak in the late 1960’s and early 1970’s. Established by Dr. Riazuddin, a student of Prof. Abdus Salam, this continues to be the only physics department in the country where some research is still done.
it is not possible to find even five real mathematicians living within the country. In the "hard sciences" (mathematics and physics) there is no one under 50 who has made a mark internationally. Although much has been made of the research work in chemistry and biological sciences, most would go only a little beyond rather routine work such as classifying chemicals found in plants and natural products. It is not cutting edge science by any means, and no large scale industrial applications have accrued from it. The social sciences appear just as impoverished as the natural sciences.

The social environment in Pakistani universities is wholly different from western, or even Indian and Iranian universities. Segregation is automatic; male hostels may not be contiguous with female hostels; the use of a certain section that houses research journals in this writer's university's library is curtailed out of fear that the sexes may intermingle in the deserted bookstacks; burqas and beards abound; and the call to prayers (azan) is given during class hours. Like overgrown children, university students kill time by making colourful birthday posters for friends, do "istikhara" (foresee future through religious meditation), and wander aimlessly in city bazaars. Few students have learned how to think; they cannot speak or write any language well, rarely read newspapers, and cannot formulate a coherent argument or manage any significant creative expression.

The cultural environment is significantly restrained by religious vigilantes whose job is to guard public morality—the Islami Jamiat-e-Talba and other Islamic groups. Drama, theatre, and musical events are forbidden, as is any activity that can bring male and female students together. Students do not engage in debates or political discussions that may strain the patience of the guardians. Religious piety is all-pervasive and campus life crawls to a near halt during Ramadan. Even poetry recitals—once a major cultural event—have become uncommon. Posters on stair-walls in this writer's department instruct one about the proper prayer to use while ascending or descending.

In Punjab University, which is effectively run by the Jamaat-e-Islami, males and females must sit in separate sections of the classroom. A male and female student were once "caught red-handed" while holding hands and severely beaten with wooden clubs. A fanatical student mob ransacked the Department of Visual Studies of Karachi University, destroying musical instruments, sculptures and paintings because these are forbidden by orthodox Islam. Student activists from
universities rove the streets in Peshawar and Lahore, throwing paint on billboards showing women’s faces.

Actually, the process of Islamisation starts during earlier stages of formal, as well as, social and cultural education. A kind of *lumpen* student is abundantly produced in schools and colleges who then makes his or her way up to the universities. He or she enters the university with poor reading and writing skills, is ignorant and uncurious, cannot coherently articulate an argument, and readily flocks to the call of ethnic and religious demagogues.

*The political environment* of Pakistani universities has undergone enormous changes over three decades. The global intellectual ferment of the late 1960s and 1970s had a stimulating impact on Pakistani campuses. Political consciousness was at its highest point, with teachers and students participating in intense ideological disputes, eager to explore ways of moving Pakistani society forward. Relatively speaking, intellectual, scientific, cultural and literary activity also flourished. Young Pakistani scholars gave up potential careers in the West to come to Pakistani universities. But in November 1981, just days after three QAU teachers were caught with anti-martial law and pro-democracy pamphlets, General Zia-ul-Haq thundered on television that he would “purge the country’s universities of the cancer of politics”.

General Zia succeeded brilliantly. Today all student unions are gone—they have been outlawed and do not even have an underground existence. Ideological disputes of the 60’s and 70’s have evaporated into the thin air, and students have simply “tuned out” from every kind of social reform issue. Left versus right politics has been replaced by simple tribalism. Pakistan’s public universities, including the so-called “big names”—Punjab, Karachi, QAU—are ruled by ethnic and religious thugs who constitute the *lumpen* element on campus. Now Punjabi students gang together against Pakhtoon students, Muhajirs against Sindhis, Shias confronts Sunnis, etc. Some campuses have Rangers with machine guns on continuous patrol. On occasion, student gangs attack each other with sticks, stones, pistols, and automatic weapons. There are many campus rapes and murders. The tribalism is not new but it has been greatly accentuated by the banning of student unions over 15 years ago on grounds they that brought national politics into educational institutions.

Over the years, Pakistan’s universities have steadily turned into intellectual and moral wastelands. Deep indifference, even antipathy,
to scholarship and knowledge has become nearly universal. This anti-intellectualism gags independent thought and action; it mutilates and mocks the spirit of scientific inquiry. There is an absence of basic academic values, and casual acceptance of abysmal ethical behaviour from faculty and students. Incompetence is rife. Resources are wasted on an epic scale.

3.3.4 Awaiting the Messiah

For three decades Pakistani education planners had claimed to recognise the need for reform and announced grandiose plans that came to naught. In the mid-1980's, Dr. Mohammed Afzal, General Zia-ul-Haq's education minister, swore that he would build MITs and Harvards in the country. Nothing materialised, and for the next 20 years, university reform went into the doldrums. Then in 2002, a feeble attempt to formulate a reform plan was made. Known as the Shams Lakha Commission Report, it mutated into the Model University Ordinance 2003. It was summarily rejected by university teachers who had become accustomed to a system that makes no demands upon them. The thought that a university job could be anything less than permanent successfully united teachers who otherwise feuded bitterly on everything else.

Entered Dr. Atta-ur-Rahman, first as minister of science and technology, and then as chairman of the newly formed Higher Education Commission in 2003. It seemed that education reform was finally going to be taken up seriously. Soon he became General Musharraf's wonderman, armed with an endless list of projects. He flew around the world, eloquently arguing that the world of higher education would change if he was given the chance.

A massive publicity blitz went underway to announce the “new era”. Huge newspaper advertisements and multi-page supplements—paid for by the Higher Education Commission—declared that the decades-old decline of Pakistan's universities had been finally reversed. The speed and scale of change was breathtaking. Banners bearing the pictures of the HEC chairman and executive director could be found on the streets of Islamabad extolling his achievements: internet connectivity in universities; a digital library; hiring of foreign faculty; students being sent abroad for PhD training; a massive PhD programme at Pakistani universities; links being forged with foreign academic institutions; faculty salaries about to be exorbitantly
increased; and money for scientific equipment becoming available. A total of 350 university related projects were announced as of April 2005, which amounts to 25 percent of the total number of projects being executed by the Government of Pakistan.\textsuperscript{22}

Unfortunately, movement became confused with progress. Foreign donor agencies and governments, fearful that an uneducated Pakistan may become an epicentre of terrorism, tripped over each other as they rushed in massive aid for education. Given the dire circumstances Pakistani education finds itself in, many welcomed the change. Many wished to believe that these were indicators of a revolution in the making or, at the least, harbingers of better times to come.

Unfortunately, miracle-a-day promises are unlikely to be ever met and billions of rupees are disappearing without tangible improvements. The present effort at university reform is rapidly becoming another missed opportunity. In fact, one fears that things may end up no better when this age of wild experimentation comes to an end.

3.3.5 Misdirected Reforms

Unfortunately for Pakistan, those in authority see the problem of higher education as simply a quantitative one. They keep emphasising that there is insufficient student enrollment, that far too few PhD degrees are awarded, and that the number of research papers published is miniscule for a country the size of Pakistan. As remarked earlier, less than 3 percent of Pakistan’s eligible population has access to a university education. Of course, one wishes that this number, as well as, other quantitative indicators, could be improved. But a long-term strategy, beginning with reform at the school and college level, is essential. To artificially jack up numbers amounts to printing counterfeit currency that can only have a negative overall effect.

It is absolutely essential not to lose sight of the real problem. The real crisis of Pakistani academia is that oases of academic competence, integrity, and freedom have steadily become fewer and further apart. Thus, key reforms include an open and liberal campus environment, higher standards of academic ethics, and activities that create greater social understanding or awareness. Unfortunately, these are not easily quantifiable. On the other hand, concentrating on numbers brings immediate propagandistic benefits. It has led to the following quick fixes:

\textsuperscript{22} Dr. Atta-ur-Rahman, private communication to the author on 15 April 2005.
Make yet more worthless universities: The HEC's first big idea behind reforming education in Pakistan was that the country needed more universities. All it takes is a piece of paper from the HEC and some paint. Some colleges have literally had their signboards taken down for repainting, and those have been put up again, changed into "universities" the next day. By such sleight of hand, the current tally of public universities, according to the HEC website, is now officially 50, up from the 23 officially listed in 1996. In addition, there are eight degree awarding public sector institutes. But this is a sham. All new public sector universities lack infrastructure, libraries, laboratories, adequate faculty, or even a pool of students academically prepared to study at the university level.

The government's "generosity" extends even into largely illiterate tribal areas. There are "universities" now in Malakand, Bannu, Kohat, Khuzdar, Gujrat, Haripur, and in many other places where lacking the resources need for establishing modern universities. The absence of vital elements is complete and total—these "universities" lack not just libraries and laboratories, but also students who are academically equipped to study at the university level as well as teachers.

Tolerance of fake universities and fake degrees: Private "universities" have flourished because of the limited capacity of public sector universities. Although there are a handful of elite private universities, there are many fly-by-night operations where money spinning is the only concern. These few-room, shoddily equipped, inadequately staffed, academic non-entities have become part of the urban scenery. Preston University branches have mushroomed in Pakistani cities. But, according to the Chronicle of Higher Education, an unaccredited PhD degree can be had for $7,500 from any American Branch of Preston University. Preston is accredited to the World Association of Universities and Colleges, formed to accredit dubious institutions like the American World University.23

Nevertheless, such universities have managed to curry favour with the HEC and have been awarded charters. The HEC has also quietly accepted that fake degrees given to influential persons will not be challenged. A recent example illustrates this point:24 the vice-


chancellor of Quaid-e-Azam University, a retired army officer, received a PhD degree apparently in violation of established rules. When the whistle-blower brought the matter to the attention of his boss, the chairman of the HEC, he was promptly handed his marching orders. The dismissal became the subject of protests in national newspapers for a while but to no effect.25

Produce yet more shoddy PhD degrees: India-envy,26 and alarm at a "PhD deficit" has driven HEC's planners into setting absurd goals. Undoubtedly, it is this which, in recent years, has elevated production of PhD graduates into a kind of holy grail. Accurate numbers are apparently unknown even to policy makers: an article written by the HEC chairman refers to production rate of 250 PhDs per annum.27 But in an interview given less than a year earlier (Dawn, 20 June 2004), he put this number as around 200. In different speeches, this number has fluctuated between 50-250. In an earlier article, he wrote: “During the forty years between 1947 and 1986, only 128 PhDs were produced in the sciences in Pakistan. This amounts to 3 PhDs per year (this is not per university but the sum output of all universities and research organisations). In 1996, Pakistan produced about 48-50 PhDs in science.”28 In any case, this has led to an incredible leap: from a yearly PhD graduation rate from Pakistani universities of perhaps less than 100 a few years ago, the current goal has been set at one thousand per annum with an additional 500 to be trained overseas. The total number of faculty members with a PhD in Pakistan is to be increased from the current number of 2000 to over 20,000 over ten years.29

This is a propagandistic move. With occasional exceptions, research in Pakistani institutions is mediocre and quite incapable of supporting

25 Technically, Daupota's contract was not renewed and so he was not literally fired. For some remarks regarding this incident see: "A Dime A Dozen" by Wajahat Latif, The Nation December 10, 2004. Also, “Seedy Side Of Higher Education”, by Wajahat Latif, The Nation, 29 April 2005.

26 Science, Vol. 309, Issue 5744, 2142, 30 September 2005. The India Science Report, a $500,000 research exercise, commissioned by the Indian National Science Academy (INSA) and executed through the National Council of Applied Economic Research in New Delhi, identified 8.74 million science graduates (those with college-level education in science). Another 1.8 million persons have advanced scientific and technical degrees, including 100,000 with Ph.D. degrees.

27 Dr. Atta-ur-Rahman, Dawn, 7 April, 2005.


genuine PhD dissertations. The consequences of mass production will be a further erosion of quality and standards. Although the HEC claims that it has checked prospective PhD candidates through a “GRE type test” (the American graduate school admission test), a glance at the question papers shows that it resembles the GREs only in so far as it is a multiple choice test. In effect, it is no more than a shoddy literacy and numeric high school level tests.

To give an idea of quality: in the QAU physics department, advertised as the best in the country, the average PhD student now has trouble with high-school level physics and even with reading English. Nevertheless, there are as many as 18 PhD students registered with one supervisor! In the QAU biology department, that number has risen to an incredible 40 students for one supervisor. The enthusiasm among supervisors for enrolling more PhD students comes from a handsome monthly sum of Rs 5000 given to each supervisor for every student enrolled. The new incentives have helped dilute PhD qualifying exams to the point where it is difficult for any student not to pass.

The implications are dire. What will happen when hundreds and, in time, thousands of worthless PhDs are cranked out? Each subsequent generation of such graduates will be more ignorant and less competent. Eventually these PhDs will become heads of departments and institutions. When appointed gatekeepers, they will regard abler individuals as threats to be kept out. The degenerative spiral, long evident in any number of Pakistani institutions, will worsen further and become yet more difficult to break.

Spend yet more on wasteful research projects: The reader may wish to visit www.hec.gov.pk and examine the list of research projects funded by the HEC. Some have the appearance of genuine projects, but others smell fishy.

Among the dubious projects (“Research Grant Award List 2003-2004”, Grant Number 247) is a research project entitled “Quranisation of Courses At The M.Sc Level”. The grant award is for Rupees 5,581,000 (about $95,000). The project summary, also to be found on the website, reads:

Researches by Muslims as well as by non-Muslims have confirmed that Al-Qur’an has the roots of disciplines both known as well as unknown to

30 Up to a maximum of 8 students. Supervisors may tap non-HEC sources for numbers in excess of this. The rules are posted on the HEC website www.hec.gov.pk and have changed a number of times.
humanity. As such, it becomes obligatory for any Islamic State to weave the Quranic perspective into its curricula. Broadly speaking, the main focus of this project is “Quranisation of existing Science Courses” at M.Sc. level by weaving the Quranic perspective into the syllabus without changing the contents of the course.

The purpose of this manifestly fraudulent and money-skimming project—to inject religion into science courses—is reminiscent of the failed efforts of General Zia-ul-Haq to create an “Islamic Science.” In those days many bearded PhDs jumped onto the bandwagon and started making calculations of the temperature of Hell, the speed of Heaven, extracting energy from trapped jinns, the “Angels of God”. They stood at the head of various scientific organisations and spent millions of rupees on their absurd conferences. Eventually, such people were ridiculed and shown up in the press. It was a minor victory for reason. But thanks to the HEC, they seem to be making a comeback.

There appear to be other skimmers on the same list too: one, for Rs 5,355,000 has been awarded to the Allama Iqbal Open University (AlOU) for research in a specialised area of chemistry which, according to the project summary, had been wrongly approached by a Nobel Prize winner in chemistry. But the AlOU is a distance-learning university with no tradition of chemistry research, and grandiose aims of challenging Nobel Prize winners are highly suspect. Moreover, the principal investigator is not from AlOU and already holds several other full time jobs at other institutions, and is rarely present in Islamabad.

When confronted by the list of unviable, but fully-funded, HEC research projects, the excuse given by the HEC is that they are not responsible for the poor judgment of the referees. This is an unacceptable excuse. Some colleagues, including this writer, once upon a time, would regularly receive proposals for refereeing that were nonsensical. To give examples: I received physics proposals for funding that violated fundamental physical principles, such as the second law of thermodynamics. Others were blatant money-skimmers—the stated prices of components were between 100 to 1000 times higher than what one normally expects. In addition, there were demands for high-priced equipment with no stated utility, as well as requests for salaries for “computer operators” to run personal computers. When I rejected these proposals as unsound, I found myself quietly black-listed by the HEC

and received no more proposals to referee. Other colleagues, whose integrity and judgment can be trusted, have also found themselves similarly sidelined. The HEC authorities apparently had no difficulty finding more pliable referees to fund the various scientific-sounding projects that are now present on the HEC website, and which the reader may peruse at leisure.

Turn on the propaganda machine and concoct successes: An HEC “Best University Teacher” programme has been extensively advertised, and cash awards of Rs 100,000 are handed out yearly to dozens of persons. This is an excellent idea, one might say, because good teaching does need to be recognised and rewarded. But in choosing the “best teacher”, no student was asked whether a particular teacher knew his or her subject well, had the necessary communication skills, or could create enthusiasm for the field. Instead, department chairmen and deans were asked to nominate the best teachers. Some nominated their favourites. Others were bolder—they simply named themselves.

Rewards for research are similarly problematic. The production of knowledge remains small and papers published by Pakistanis are rarely cited—the only indication of genuine worth. A poorly thought-out and dangerous, HEC scheme involves giving massive cash awards to university teachers for publishing research papers. Although these stimulants are said to have increased the number of papers published in international journals by a whopping 44 percent, there is little evidence that this increase in volume is the result of an increase in genuine research activity.

The fact is that only a slim minority of Pakistani academics possesses the ethics, motivation, and capability needed for genuine scientific discovery and research. For the majority, HEC incentives are a powerful reason to discover the art of publishing in research journals without doing research, finding loopholes, and learning to cover up one’s tracks. There are locally produced science journals where the editor will publish gibberish, either to oblige a friend or for payment, without batting an eye. Often the “journal” has only half a dozen issues out before it ceases publication and goes into oblivion. But this may be enough for contributors and editors to chalk up enough publications for their promotions. Fraud in international journals is common: one may choose journals of little repute (mostly Indian and Polish), resubmit one’s previous work in some slightly altered form, cook up data without
having performed any experiment, hide negative results but state positive ones, plagiarise the work of others, quote without reference, and so on. All this has increased after the HEC broadcast the message: corruption pays.

How prevalent is academic fraud? Nobody really knows, but several “well-reputed” Pakistani scientists have been caught red-handed by the international community. It has had not the slightest effect upon their status and career—they continue to thrive. Society at large does not understand the fine points, and there is no real academic community in this country that cares. So academic fraud is not thought of as really wrong; it is considered just a part of life.

3.3.6 Towards Real Reform

The government’s current “reform strategy” offers false remedies by playing the numbers game and concentrating upon glitzy things like internet access, digital libraries, and virtual learning. Yet it refuses to acknowledge the dreadful diseases that have been eating into the fabric of education and Pakistani society. So what needs to be done?

The “don'ts” policies are clear: stop promoting religious fanaticism; stop the creation of worthless new universities; stop funding and rewarding research that really is not research; stop dishing out useless PhDs; and stop rewarding academic corruption. Of course, it is important to increase access to education, but the increased access carries meaning only if there is a certain minimum quality as well.

The “do’s” are far more than can be discussed here. Broadly speaking, they can be divided into two mutually distinct sets. One set must deal with creating a freer university environment, controlling campus religious vigilantes, and stopping campus violence. Another set must be aimed at raising the level of general competence of teachers and students by ensuring that they actually have an understanding of the subject they teach or study, and must involve increasing the amount of research in specific disciplines.

**Entrance tests for students are critically important.** First, there must be university entrance examinations at the national level to separate individuals who can benefit from higher education from those who cannot. No such system exists in Pakistan. Only local board examinations—where rote memorisation and massive cheating are rampant—are used to select students. Reform of these boards is
essential, but no progress has been made although many grand plans have been in existence for nearly fifteen years. Instituting such centrally administered entrance tests everywhere will not be easy. In the NWFP, street demonstrations organised by the Jamaat-e-Islami demanded scrapping a proposed admissions test for university admission, the rationale being that students from tribal areas would be at a disadvantage if they had to compete against students from urban areas. Similar protests have taken place in the interior of Sind.

It is important to note that both Iran and India have centralised university admissions systems that work very well. Although corruption in India is perhaps as pervasive as in Pakistan, admissions policies to the top universities have nevertheless been acknowledged to be fair and have remained intensely competitive over several decades. Fair examinations are presumably also possible in Pakistan, provided extreme care is taken.

Having such university entrance examinations would be important for another reason as well—they would set the goal posts for colleges and high schools all over Pakistan. In the US, the Scholastic Aptitude Tests, centrally administered by the Education Testing Service in Princeton, are extremely useful in deciding student aptitude for university education. The “A” level examinations in Britain have similar importance. At the PhD level, if the HEC is at all serious about standards, it should make it mandatory for every Pakistani university to require that a PhD candidate achieve a certain minimum in an international examination such as the GRE. These examinations are used by US universities for admission into PhD programmes.

Given the state of student and teacher knowledge, and the quantity and quality of research in Pakistani universities, selection through GRE subject tests would have the welcome consequence of cutting down the number enrolled in HEC indigenous PhD programmes from 1,000 per year to a few dozen. The present safeguard of having “foreign experts” evaluate theses is insufficient for a variety of reasons, including the manipulations commonly made in the (almost opaque) process of referee selection.

Entrance tests for university faculty must be made mandatory. The system has remained flawed for so long that written entrance tests for

32 As a consequence of repeated criticism, the HEC has finally conceded this point. However it remains to be seen if GREs requirements will be seriously implemented.
junior faculty, standardised at a central facility, are essential. Without them, universities will continue to hire teachers who readily transmit their confusion and ignorance to students. No teacher has ever been fired for demonstrating incompetence.

*Be harsh and uncompromising in matters of academic fraud and corruption:* Academic crime flourishes in Pakistan’s universities because it is almost never punished. Even when media publicity makes action unavoidable, the punishment amounts to little more than a slap on the wrist.

*Better, more transparent, and accountable ways to recruit vice-chancellors and senior administrators are needed.* Pakistan has a patronage system that appoints unqualified and unsuitable bureaucrats or military men as vice-chancellors, and that staffs universities with corrupt and incompetent administrators. While a tenure-track system for faculty is currently under discussion and may allow for breaking with the system of life-long jobs independent of performance, there is no corresponding system being contemplated for the top leadership. But without good leadership and people who can be role models, no institution can be reformed.

*Students must be permitted, even encouraged, to self-organise.* It is crucial to bring back to campuses meaningful discussions on social, cultural and political issues. To create a culture of civilised debate, student unions must be restored, with elections for student representatives. They will then provide the next generation of political leaders. Such a step will not be free from problems—religious extremists rule many Pakistani campuses although all unions are banned. They would surely try to take advantage of the new opportunities offered once the ban is lifted. Political parties have also been less than responsible. But the reinstatement of unions—subject to their elected leaders making a pledge to abjure violence and the disruption of academic activity—is the only way forward towards creating a university culture on campus. Ultimately, reasonable voices, too, will become heard. As an interim step, the government should allow and encourage limited activities such as community work, science popularisation by students, etc.

---

33 In Italy, passing the centrally administered “concorso” examinations is necessary for the appointment of junior faculty. A sample lecture must also be delivered on a topic given to the candidate a day earlier.
To condemn Pakistani students as fundamentally incapable of responsible behaviour amounts to a condemnation of the Pakistani nation itself. If students in neighbouring countries can study, successfully as well as unionise and engage in larger issues, then surely Pakistan’s students can do so as well.

Foreign faculty hiring must include Indians. It is a good thing that the Higher Education Commission has initiated a programme for hiring foreign faculty with attractive salaries. There are simply not enough qualified persons within the country to adequately staff departments. But the success of this programme is uncertain and programme management is poor. Jealousy at salary differentials and a fear that local incompetence will be exposed, has led local teachers and university administrations to block the hiring of faculty from abroad.

There is another problem: Pakistan’s image as a violent country deters most foreigners from wanting to come and live in Pakistan for any considerable period of time. Therefore, westerners are almost totally absent from the list of those who have applied under the foreign faculty hiring programme. Apart from Pakistani expatriates in the Middle East, the bulk of applicants are Russian speakers from the former Soviet Union countries. One wishes it could be otherwise. It would be a major breakthrough if Indian and Iranian teachers could be brought to Pakistan. Indians, in particular, would find it much easier to adapt to local ways and customs than others and may also have smaller salary expectations. The huge pool of strong Indian candidates could be used to Pakistan’s advantage—it could pick the best teachers and researchers, and those most likely to have a positive impact on the system. In the present mood of rapprochement, it is hard to think of a more meaningful confidence building measure.

3.3.7 Comparing With Neighbours—Personal Impressions

It is not utopian to imagine an education system that works in a country like Pakistan. India and Iran both show it can be done.

Few Pakistanis get to visit India, the so-called “enemy country”, and fewer still to independently assess the development of science and education across its hugely diverse regions. I had the exceptional good fortune to make such a visit in 2005, made possible by a UNESCO prize that included a 4-week lecture tour which took me around India: Delhi, Pune, Mumbai, Bangalore, Chennai, Hyderabad, Bhubhaneswar,
Cuttack, Calcutta, and then back to Delhi again. I gave several lectures daily at schools, colleges, universities, and research institutions. To my knowledge, no other Pakistani has had such an opportunity to experience Indian educational institutions.

My impression was that many Indian universities have a cosmopolitan character and are world class. Their social culture is secular, modern, and similar to that in universities located in free societies across the world. (In Pakistan, Agha Khan University and the Lahore University of Management Sciences would be the closest approximations). Male and female students intermingle freely, library and laboratory facilities are good, seminars and colloquia are frequent, and the faculty engages in research. Entrance examinations are tough and competition for grades is intense. Some "deemed universities" and other institutions I visited (TIFR, IISc, IITs, IMSc, IICT, IUCAA, JNCASR, IPB, Raman Institute, Swaminathan Institute) do research work at the cutting edge of science. A strong tradition of mathematics and theoretical science forms a backbone that sustains progress in areas ranging from space exploration and super-computing to nanotechnology and biotechnology.

As a Pakistani, I could not but help compare Pakistan's premier public sector university (QAU) with those in its neighbours' capitals. First to the east: Jawaharlal Nehru University, and the Indian Institute of Technology, in Delhi. Their facilities are simple and functional, nothing like the air-conditioned and well-carpeted offices of most professors at QAU. And, more importantly, every notice board is crammed with notices for seminars and colloquia; visitors from the very best foreign universities lecture there; research laboratories hum with activity, and pride and satisfaction are written all around.

Conflicts on campuses do exist—communist and socialist students battle with Hindutva students over the Gujrat carnage, Iraq, Kashmir, and the doctoring of history in Indian textbooks. Angry words are exchanged and polemics are issued against the other, but no heads are bashed. I was impressed by the fearlessness and the informed, critical intelligence of the students who questioned and challenged me. I cannot imagine an Indian professor meeting a similar reception in Pakistan.

The above are personal impressions, but they confirm more quantitative assessments of Indian higher education. The India Science Report, released in September 2005, combines information from a massive public survey with data on the country's higher education sector. The $500,000 exercise, commissioned by the Indian National
Science Academy (INSA) and executed through the National Council of Applied Economic Research in New Delhi, identified 8.74 million science graduates (those with college-level education in science). Another 1.8 million persons have advanced scientific and technical degrees, including 100,000 with PhD degrees. There is no comparable data for Pakistan available.

Now for more impressions but this time of a country to the west of Pakistan: after attending a conference on mathematical physics in Teheran some years earlier, I came away with the impression that Sharif University of Technology, and the Institute for Theoretical Physics and Mathematics, are impressive institutions filled with professional activities, workshops, and seminars. Like the institutions I had visited in India, they do not represent the entirety of Iranian universities but do contain something that is common to Iran.

Even as they maintain good academic standards, Iranian university students are heavily political and are spearheading the movement for freedom and democracy. Iranian students make it to the best US graduate schools. Although it is an Islamic republic, bookshops are more common than mosques in Tehran. Translations into Farsi appear in just weeks or months after a book is published in the western world.

3.4 CONCLUSION

Twenty-three hundred years ago, Plato observed that the perfect system of education is necessary to produce the perfect society. But, on the other hand, the educational system derives from the cultural ethos and relations of power prevalent in that society. Thus, problems prevalent in the society at large are inevitably reflected in the education it gives to its young. This is the usual chicken-and-egg problem. Hope for a society lies in the new generation being better educated and more aware than the one that preceded it.

Given the class structure of Pakistani society, and the state’s patronage of feudalism and tribalism, there are no easy solutions to this fundamental problem. Education cannot be freed from inequities unless there is a social revolution which is not on the horizon.

But there are ways to ameliorate the worst aspects of the present system and step by step reforms that can make things better. As emphasised in the earlier section of this chapter, one needs to disaggregate the problems into those of school and higher education.

For schools, in addition to improving the infrastructure where needed, reform must be directed towards the curriculum, examinations, textbooks, teacher training, and school administration.

For higher education, it is crucial to discard the numerical games that have brought such acclaim to the Higher Education Commission. Even if numerical targets are actually met, Pakistani universities will still remain intellectually arid. The task of university reform has not yet seriously begun. Nor can it being while wild-eyed fanatical student groups rule campuses, academic thuggery is rewarded rather than punished, and university professors are recruited from those who have failed at all else.

A financial and academic audit by international experts is essential to check the squandering of resources. To claim that some benefits have accrued from HEC reforms is a weak argument—with the huge amounts being spent it would be nearly impossible to avoid doing at least some good. But the real need is for deep administrative and organisational reforms, together with the strong political will needed to handle the counter-reaction they would inevitably provoke.

Only modern, forward-looking societies have so far been able to produce educational institutions that serve the needs of an advanced society; there is no counter-example. Real reform will require that the purpose and philosophy of education be accepted, together with the norms of civilised, ethical, behaviour. It is time to start living in the present rather than inflicting upon students medieval concepts of knowledge, values, and behaviour. Pakistan's future will be bright only if it builds institutions that produce students who are informed, critical, and active citizens of the modern world.