Achieving excellence in classroom teaching in our universities

DR. A S M A HASEEB

LET us begin with an excerpt from a letter of a university student of this country: "I am a … student at … University. I am having some difficulty with my faculty members. Most of the senior professors, I feel, are unable to teach. … They seem to have little idea about the grading system, curriculum and teaching process. …Is there anything we can do…?"

The letter appeared a couple of months ago in The Daily Star (SWM). One may find the tone of the letter rather harsh. But in essence it does reflect a genuine sense of frustration and desperation on the part of the student. This university student is certainly not alone in this country in having such classroom experience. If one goes around asking students, the answer in many cases is likely to be 'boring', 'un-interesting', 'un-stimulating'…etc. On the other hand, if one inquires of university teachers about their experience, the answer will often reveal that students are not interested, attentive, serious, responsive, … and so on. These two opposing situations are actually two sides of the same coin. It is true that in this country there is a general lack of students' motivation for socio-politico-economic reasons, many of which are beyond the control of teachers. But in spite of this generally unfavourable learning environment, one has to admit that the primary responsibility to improve the situation lies with the teachers and academic administrators.

Students complaining about their teachers are not unique to this land, but are rather universal. The American Psychological Association, in a survey in 2000, found out the following as the top 10 complaints of University students about their teachers:

1) Poor course organisation and planning; 2) poor teaching mechanics (for example, poor use of the blackboard or speaking too fast, softly, or slowly); 3) lecture style and technique, including being too wooden or long-winded; 4) poor testing and exam procedures; 5) negative mannerisms, including attire and verbal and nonverbal tics; 6) monotone voice; 7) poor use of class time (for example, coming in late and stopping early); 8) intellectual arrogance -- talking down to or showing a lack of respect for students; 9) being unhelpful and not approachable; and 10) unfair or confusing grading process.

Universities in advanced countries do not consider the views of the students as taboo. They rather take students' concerns quite seriously and put continuous efforts to improve the quality of teaching.

Class lecture is still the most dominant mode of learning in universities around the world. The effectiveness of classroom teaching is therefore very vital to the overall quality of education. The role of teachers is probably the single most important factor in effective classroom teaching. Generally, University teachers are recruited from among the topmost achievers in their education. University teachers have to earn highest degrees and are experts in their respective areas of specialisation. The primary task they perform at universities is, however, teaching. Interestingly, university teachers in our country do not have any formal training on teaching. In contrast, even primary school teachers have to undergo rigorous formal training on how to teach.

Teaching is a profession in its own right. Just being an expert in a particular subject does not automatically make one an effective teacher. Once it used to be thought that teaching is an art and 'good teachers are born'. True that there are some individuals who inherently possess great talent in teaching, but research on education over the years has shown that teaching involves a great deal of science and it is a skill that can be acquired through proper training.

The need for the formal training of university teachers in pedagogy is increasingly being recognised in universities around the world. Most universities in North America have their in-house centres/institutes specifically aimed at fostering excellence in teaching among their teachers. These centres conduct workshops and training programmes in teaching which benefit faculty members at all levels. Such centres, manned by education experts as core members, provide professional support to individual faculty members to improve their teaching skills through evaluation, consultation, advice, videotaping and reviewing of teaching performance, feedback etc. These centres also publish handbooks/practical guides for teaching and newsletters on a regular basis so as to keep teachers abreast of modern teaching techniques.

An integral part of any teaching improvement programme is students' evaluation. In many universities around the globe, students are required to evaluate the courses they take and the instructors who offer the courses at the end of each term. It is a continuous process repeated every term for every course. This provides very valuable feedback to the teachers and academic administrators to identify areas that need further improvement. The purpose of such evaluation is not witch hunting but is solely to achieve excellence through incremental improvements.

Universities in our country should recognise, as the first step, that there is a real need to achieve teaching excellence. The next step would naturally be to develop an effective programme (and a culture) in each university to support teaching excellence on a continuous basis. Achieving excellence in classroom teaching does not really need much money. But it can bring many rewards.

Studies have shown that there is a good correlation between achievements of students in University courses and their subsequent professional performance. The achievements of students depend on the quality of their learning, which in turn is directly related to the quality of teaching. Therefore, the most promising way of improving graduates' performance is to improve teaching. This is particularly important in this era of globalisation when our graduates in a variety of disciplines including engineering, health and business are facing competition from foreign professionals in the job market even at home. Improving the quality of education is key to ensuring the success of our graduates in this globalised market. Improved classroom teaching can contribute very significantly to achieve this goal.

There is an old saying which goes as follows: if the student has not learned, then the teacher has not taught. New teaching philosophy these days is increasingly being moulded along the moral of this saying. Recently there has been a paradigm shift in the accreditation process for different academic programmes, particularly engineering programmes, in Universities in advanced countries. The accreditation approach is now changing from 'what is being taught' to 'what is being learned'.

To conclude, universities in our country should recognise, as the first step, that there is a real need to achieve teaching excellence. The next step would naturally be to develop an effective programme (and a culture) in each university to support teaching excellence on a continuous basis. The University Grants Commission of Bangladesh can play a pivotal role in this regard. Achieving excellence in classroom teaching does not really need much money. But it can bring many rewards. Above all, it can make teaching a source of immense professional as well as personal satisfaction and pleasure both for the teachers and the students.

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Parliamentary election in Zimbabwe

An instance to emulate

DR. MD. RASHIDUZZAMAN KHAN
writes from Harare, Zimbabwe.

THE low key campaign on the street allowing opposition adequate exclusive time, allowing them access to the general mass instead of taking recourse to such campaign as leading to violence, intimidation and anarchy, may be some good examples for us to replicate for better.

The Zimbabwe parliamentary election took place on 31st March 2005. Basically it was a two-way battle between ruling ZANU (PF) and MDC (Movement for Democratic Change), a party created in 2000 out of the outfit of the then Trade Union Congress. The party was allegedly sponsored by Britain and other Western governments to counter President Mugabe. MDC did stunningly well in 2000 parliamentary election by capturing 57 out of 120 seats in the parliament. A clear divide emerged. MDC winning urban seats in all major cities including Harare, Bulawayo, Mutare, Kwekwe and also urban seats in Matabeleland, the land of predominantly Ndebele speaking population. ZANU (PF) won 63 seats mainly in rural areas dominated by Shona speaking people.

Election on 31st March was amazingly peaceful with no violence reported even in the staunchly anti Mugabe press. ZANU (PF) won 78 seats, MDC 41 and one seat went to a rebel Mugabe minister Jonathan Moyo standing as independent. The election campaign was a very low key one. We have not witnessed any large gathering or procession in the capital during the election month. One will see only a few posters mainly on the light posts urging support for the party and specific candidates. One of the polling booth was in front of our house and I have personally visited a number of polling booths. The queue started early in the morning, no one was trying to convince others to change mind. Everyone was minding his/ her own business and left the booth soon after casting vote.

ZANU (PF) branded this election as anti-Blair, and power to Zimbabwean manifesto and MDC fought it on the ground of economic mismanagement by the ruling party and law and order situation. ZANU (PF) blamed non co-operation of the western countries and longstanding drought for economic hardships.

Neither major party was able to make significant gain in the core constituencies of the other. MDC maintained dominance in the urban centers and most of the rural areas of Matabeleland. Though their dominance in Bulawayo increased slightly, 78.62 percent in 2005 against 76 percent in 2000, their degree of dominance decreased in other strongholds (Harare 67 percent against 75 percent, Matabeleland 51 percent against 66 percent in 2000). MDC received 46 percent of the national valid votes in 2000 while their share in 2005 has been only 39.6 percent.

The fall in MDC's support can be attributed for their lack of clear view on the land issue, over dependence on western support and lack of intensive campaign among voters. ZANU (PF) very successfully depicted Mr. Tsvangirai as the agent of the colonialists and MDC as a party bent upon reversing the ownership of the 78 percent of the arable lands back to less than 1 percent of the white settlers. The western media's campaign to portray Zimbabwe as a country lacking in law and order also went against MDC as Zimbabwe is still the safest country in the region. Also the government portrayed fairness by adopting most of the SADC election guidelines, allowing opposition propaganda time in state radio and television and allocating campaign fund to both MDC and ZANU (PF).

After the election MDC made a low key complaint of massive election fraud and western media branded the election as sham. All the regional observers endorsed the election results as free and fair. The western media is devoid of ground realities and will never accept any result in which Mr. Mugabe emerges victorious.

The low key campaign on the street allowing opposition adequate exclusive time, allowing them access to the general mass instead of taking recourse to such campaign as may be leading to violence, intimidation and anarchy, are some good examples for us to emulate for better.

LEST WE FORGET

F R Khan -- An architect with a difference

SYED ASHRAF ALI

"A prophet is not honoured in his own country" -- so goes the proverb. It is painfully true in case of Dr. Fazlur Rahman Khan, the legendary Bangladesh-born structural engineer. His achievements are hailed by men of science all over the world, obituary references to him were made even in leading magazines like Time and Newsweek (perhaps the only Bangladeshi non-political personality to be so honoured), he was acclaimed the 'Construction Man of the Year' and accorded Alfred E. Lindau Award (considered to be the most precious award in the world of architecture), he headed the prestigious Council on Tall Buildings and Urban Habitat for years (till the end of his days), and yet very few in our country are aware of his monumental contribution, world-wide fame and recognition. No organisation worth its name in Bangladesh even bother to pay tribute to this great son of the soil even on his birth or death anniversary. It very cruelly reminds us of Allama Iqbal's memorable utterance :

Izzat use mili jo watanse nikal gaya,
Woh ful dalimey chara jo chaman se nikal gaya

Fortune smiles on him who leaves the motherland,

The flower that leaves the garden glimmers in the garland.

F.R. Khan was an outstanding civil engineer who was hailed all over the globe for innovations in high-rise building construction, especially tubular design. He earned international fame for inventing the "bundled tube" system, a structural network consisting of narrow cylinders clustered together to form a thick tower, which minimised the amount of structural steel needed for high towers and eliminated the need for internal wind bracing (since the perimeter columns carry wind loadings). He was born in Dhaka on April 3, 1929 and obtained his Bachelor of Engineering degree from Shibpur Engineering College, University of Calcutta in 1950 at the top of his class. He worked as assistant engineer for the India Highway Department, and then taught at the University of Dhaka. Qualifying for a Fulbright scholarship in 1952, he enrolled at the University of Illinois in Urbana, where he completed enough credits for two Master of Science degrees, one in applied mechanics and the other in structural engineering. He obtained a doctorate in the latter and accepted an engineering position in Skidmore, Owings and Merrill, a leading and world-renowned architectural firm in Chicago.

He returned briefly to his native country (then East Pakistan) and won an important position as Executive Engineer of the Karachi Development Authority. After serving Karachi Development Authority for more than three years (between 1957 and 1960), he came to the painful realisation that the environment in the then Pakistan was in no way congenial to the blossoming of a budding creative genius like him. Although he loved the motherland with all his heart, he was pained to find that the administrative demands in the Karachi Development Authority kept him from design works. He found no way out but to return to the United States where his talent and creativity would have ample opportunities to blossom in their full majesty and splendour. In 1960, he joined Skidmore, Owings and Merrill once again and remained associated with it till his last breath. He shuffled off the mortal coil while on a job-site visit to Jeddah on March 27, 1982.

It was during the early 1960s that he laid the groundwork for his later successes in the field of high-rise buildings. This was a time when intense urbanisation was bringing in its wake a new wave of high-rise buildings. His 1964 ASCE paper on shear-wall-frame interaction was a milestone in the development of economical high-rise buildings in both concrete and steel. With the methodology developed in this paper, the stiffness of frame buildings could be increased several times, without an increase in cost.

In the same period, Dr. Khan also initiated the tubular design concept, with its first application in the 43-storey reinforced concrete Chestnut-Dewitt apartment building in Chicago in 1963.

The next innovation, pushing still further the economically feasible height of multistorey buildings, was the application of shear-wall-frame inter-action principles to tubular structures, creating the tube-in-concept (a pharase coined by Khan), applied first to the Brunswick Building in Chicago. This concept was soon applied to many other structures, including the 52-storey One Shell Plaza, in Houston, which was the tallest reinforced concrete building in the world at the time of its completion.

Also in the 60s, came Khan's first steel version of the tubular structure : the diagonally braced, 100-storey John Hancock Building in Chicago. It became another milestone, particularly due to the strong expression of its dominant structural feature in the architectural facade of the building.

Then came the Sears Roebuck Tower in Chicago in 1974, using a further innovation -- bundling nine tubes into a single structural system -- with 110 stories and 1450ft. height. It was the world's tallest building in the 1980s. Like the John Hancock, it used about half the steel needed for a conventional tubular design.

More innovations followed under his direction, including composite buildings, combining the advantages of the rigidity of a concrete tubular structure and the speed of erection of steel slab systems and interior columns.

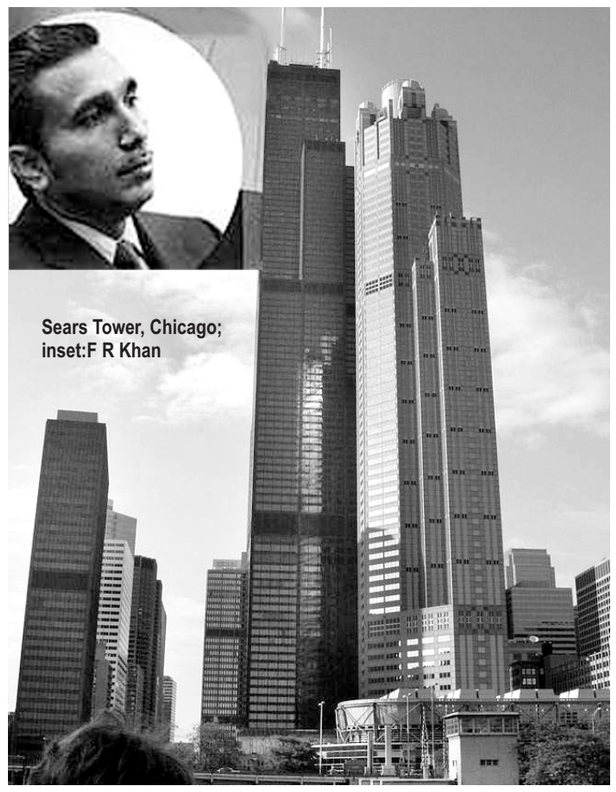
A principal feature of Khan's work was to make highly efficient exterior tubular configurations to carry the lateral loads imposed on multistory buildings, rather than assigning this role to less efficient interior frames which clutter the rentable space, as had been common. The innovations introduced by Khan not only improved the rigidity of tall buildings, resulting in their superior performance, but also resulted in substantial economies over the cost of buildings designed, using traditional schemes.

Dr. Khan's startling innovations did not, however, go unchallenged. Skeptics and high-brows in many a circle criticised his innovative theories and questioned their feasibility. But the economy and effectiveness of his massive structures (among the world's tallest) silenced the critics once and for all. As a result, most of the ultra-high buildings today are built on principles introduced by him.

F.R. Khan became the master builder of tall structure of the 60s and 70s. His buildings provided an economic answer to the needs of the day, utilising not only advanced technology but the art of engineering as well. Dr. Khan indeed was an architect with a difference. He believed that there is beauty and simplicity in the structural form of a building that is natural to it from an engineering point of view. Instead of going for a preconceived architectural expression, he let the natural structural form be the architectural representation of a building. He was encouraged and supported in this bold effort by Bruce Graham, a dominant architectural figure at Skidmore, Owings and Merrill. Khan and Graham jointly shaped the new skyline of many of the world's larger cities.

Khan's influence on the architecture of high-rise buildings was acknowledged by Skidmore, Owings and Merrill with his admission, in the late 1960s, as a general partner in a firm that had heretofore only architect partners. Fazlur was later instrumental in the elevation of other structural and mechanical engineers to the status of partner.

In the non-high-rise category as well, a number of very remarkable projects were designed by Dr. Khan. Of these mention may be made of the suspension roof of the Baxter Laboratories buildings near Deerfield, Illinois, the Hajj Terminal of the King Abdul Aziz Airport (fabric suspension roof) in Jeddah, which covers an area of 105 acres; the fabric suspension roof of the Humphrey Memorial in Minneapolis; the University in Makkah; the US Air Force Academy in Colorado Springs; and the engineering designs for the solar telescope at Kitt Peak, Arizona.



Sears Tower, Chicago; inset:F R Khan

The honours received by Fazlur Rahman Khan during his chequered life are too numerous to be mentioned here. In 1972, he was proclaimed "Construction's Man of the Year" by the *Engineering News Record* for his many accomplishments in the field of ultra high-rise buildings. In 1973, he was the recipient of the Alfred E Lindau Award for his "outstanding contributions in advancing the art of reinforced concrete construction in high buildings". He also received the Wason Medal for Most Meritorious Paper in 1971 for his publication, co-authored with Mark Fintel, on "Shock-absorbing Soft Storey Concept for Multistorey Earthquake Structures." He was honoured with the coveted and prestigious post of the Chairman of the Council on Tall Buildings and Urban Habitat right from its inception until his death. He was also a member of Committees 118, Use of Computers, and 442, Response of Concrete Buildings to Lateral Forces.

F R Khan had always been both human and humane. Unlike the average run of engineers, he never found himself confined to the dull and stereotyped environment of cut and dried formulae and techniques. He began his professional career as a structural engineer and gradually developed into an engineer architect with a keen perception of aesthetics. Furthermore, his appreciation of the mechanical and electrical aspects of building design gave him an overview of the entire construction process. Even beyond his intimate understanding of the non-structural disciplines and aesthetics and his exceptional intuitive understanding of structural behaviour. Khan had a remarkable perception of the social needs of the millions who live and work in the cities. Engineering and architecture were the media through which he sought to fulfil the needs. In a way, he was a philosopher who defined the role of the architect engineer in society. In the ultimate analysis, it was the urge to respond to human needs and aspirations that enabled Dr. Khan to make the outstanding structures and innovations that brought him recognition and honour by society and profession.

F R Khan was also an exceptional communicator very much at ease with all groups as well as large audiences. He had the remarkable ability to articulate complex concepts in simple, understandable language. In spite of the intense demand of his busy professional life, he found time to regularly teach courses at the Illinois Institute of Technology and supervise graduate students. With his untiring activities, remarkable achievements and pleasant but commanding personality he inspired countless young engineers and set a standard for them to measure up against.

In 1971, when the merciless military junta launched the most heinous atrocity on the innocent unarmed civilian population in Bangladesh, Dr. Khan, in spite of his heavy commitments and preoccupations, found enough time to organise the Bangalees and their friends in the United States into a Defence League which raised enormous funds for relief works. He also organised a strong lobby in Washington for months to urge the US authority to stop shipment of arms to the junta. No wonder, he was the founder-president of both the Bangladesh Foundation, which helped the grassroots non-government development projects, and the Bangladesh Association in the United States.

The enormous professional success did never affect the behaviour or the way of life of this great man. He remained humble, always accessible to his associates and friends, and continued his modest way of life. Never did he change his philosophy that people are the focal point of life. "In social contacts," says his friend Mark-Fintel of Portland Cement Association, "he was interesting, entertaining, and deeply and sincerely concerned with his friends, their families, their lives, joys, and sorrows. To him, friendship meant giving of himself, and that is why he had so many friends, and no enemies." This philosophy always remained the strongest motivation behind his actions, whether in professional or in personal life.

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