

“Water, Water Everywhere”

Recent weeks have seen a tremendous surge of confidence in our economic prospects. A host of factors created on air of great expectancy and optimism. Many people are now seriously talking of our capacity to compete with China. Indeed, the fact that we are a net exporter of goods to China now establishes the resilience and growth prospects of our economy.

India's unique selling proposition propelling this growth and engendering optimism is the fact that we are home to one of the world's largest technical manpower pools. We have over 5 million scientists, engineers and technicians in India now. About 300,000 of them (6%) are engaged in research and development. We can boast of 450,000 allopathic physicians, 200,000 agricultural graduates and 40,000 veterinarians. The stock of other post graduate degree holders is about 4.5 million in liberal arts, and a million each in sciences and commerce. In addition, we have about 9.5 million graduates in liberal arts, 4.5million in sciences and 5 million in commerce. Our engineers alone exceed a million now, with 1100 colleges producing 350,000 technologists every year, 60 percent of whom graduate from the four southern states alone!

All these are impressive numbers by any standards. India certainly has a vast higher education infrastructure, which can be the envy of any developing country. But these numbers hide a grave crisis in our higher education. Our finest scholars – about 5 percent – are a match for the brightest and best in the world. But many of them are migrating to the U.S and West. Recent reports say that the 75,000 Indian students constitute the largest foreign contingent in American universities! These are products of the few good institutions, backed by exceptional talent, family support and conducive environment. But most of our colleges and universities produce graduates of indifferent quality. A culture of rote learning, lack of application of knowledge, and poor examination system have undermined our higher education. Most graduates lack basic communication skills, nor do they exhibit problem solving capacity. Educated unemployment is very much on the rise, largely because most graduates cannot promote wealth creation and are therefore unemployable. And yet, our society faces acute shortage of problem solvers, and capable workers in various fields like health care, education, justice delivery and law and order. This is a classic case of a mismatch between our needs and human resources. As Coleridge lamented in his immortal poem, "Water, water everywhere; but not a drop to drink!"

Clearly, the main function of higher education system is to add real value to human resources, and produce wealth creators and leaders in all fields – business, professions, politics, administration, and creative pursuits. Even the crisis in school education is compounded by the failure of higher education. Most problems in our schools – curriculum, text books, teaching methods, examination system – can be overcome by innovative efforts and sensible public policy. But there is phenomenal shortage of good teachers. And only university graduates can be teachers! Millions of graduates are

hunting for jobs, and yet, most of them cannot be trusted with our children's education. A classic vicious cycle has set in : poor school education has weakened university standards; and collapse of higher education denies good teachers to schools! All of us face this dilemma in our schools.

Happily, there are several positive factors which can be the foundations for excellence in higher education. Youngsters today are ambitious, hard-working and highly motivated. There is fierce competition for professional and university education. Graduates are no longer seeking cushy jobs in government; they are ready and willing to compete in the market. Parents gladly pay huge sums for their children's education. Our society and civilization treasure learning and scholarship. We can build on these strengths. While private, non-profit investment in higher education is necessary, it is no panacea to our problems. Market forces alone cannot deliver, as we cannot afford to ruin lives of millions of youngsters by trial and error. Money is not always a solution. We need direction and will to adopt the best practices here and elsewhere. There are several non-monetary inputs which can dramatically improve our higher education. Let me give three examples of what can be done.

First, the quality of teachers is appallingly low. There is enormous in-breeding, with an alumnus being recruited in the same institution where he pursued all his education, promoted, and eventually made the vice-chancellor, without ever being exposed to other centres of learning. There is no cross-fertilization of ideas whatsoever, and we call them universities! The jockeying for political patronage, in-fighting, caste prejudice and resistance to innovation are unbelievable. Most western universities have a simple rule : a university graduate is not appointed as a teacher in the same institution. With constant new blood, new ideas, rigorous intellectual discourse and innovation are fostered. And it does not cost a penny.

Second, we have a rigid and stultifying academic atmosphere, with artificial divisions of various disciplines, and pre-determined combinations of courses on offer. As a result more and more people are ignoring humanities education and lack broad perception, depth and communication skills. Charles Eliot, the legendary educationist and President of Harvard found an effective solution over 130 years ago. By introducing the Elective System, he transformed a college with one uniform curriculum into a great university without any prescribed course of study at all. Freedom of choice, opportunity to win academic distinction and discipline were all fostered at one stroke. Students could opt for courses of their choice, depending on their aptitude and the teachers' scholarship and talent. This also meant that teachers whose courses were not valued became irrelevant, and in effect students evaluated teachers! Artificial and rigid barriers of knowledge disappeared. Our own IITs have recently introduced a system of each student having to do a prescribed number of courses of her choice in humanities. Even a century after all the great universities adopted the Elective System, our universities are blissfully ignorant of any innovation!

Third, our examinations are disgraceful, often testing rote memory. A careful memorizing of answers to questions posed in the three previous years (excluding the immediate past

year) will guarantee high grades! Analytical skills, application of knowledge, problem-solving capacity and innovation are rarely tested. There are many models of great examinations evaluating the students skillfully, and creating demand for better education by redefining success.

All these and many other innovations cost no money. They only need painstaking efforts, sensible innovation, and adoption of successful best practices. A nation which aspires to greatness must foster excellence, and universities are ripe for far-reaching reform. Only then can we sustain growth, compete with the world, improve our quality of life and promote happiness.

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