

Conferment of the Oak Ridge Honorary Citizenship

By the Mayor of Oak Ridge.

Reply by Prof. V.C. Kulandai Swamy

29.06.2008

Esteemed Mr. Mayor, and distinguished guests,

I. Acknowledgement

I deem it a matter of great distinction and memorable honour to receive the key of the City of Oak Ridge and be conferred its Honorary Citizenship.

There comes in an individual's life a moment of pride, totally unexpected and from sources unfamiliar in all aspects. Mr. Mayor, this is one such moment.

Mr. Mayor, I have in my fairly long career received a few honours: but this one is unique. On all other occasions, it was for service rendered: it was for some contributions made or for an achievement recorded and from known sources. But this one comes like the rains from the sky: a real gift of nature.

Mr. Mayor, I deem this honour a real gift, flowing from your magnanimity, to recognise and honour an individual living and working in a country so far away and in a society so widely separated from yours.

2. Gentleman

The honour is all the more significant, since I am only an engineer and technologist. Of the seven wonders of the world, four belong to achievement in Engineering and Architecture. But still, Engineering is not considered a learned profession. It is Law and Medicine, which from the beginning of civilization have been reckoned as learned professions. I may narrate an anecdote from the life of Hoover, one of your great presidents.

Hoover used to take a morning walk daily and during one of the mornings, a stranger joined him in the walk. They conversed as they walked. The new companion was a little inquisitive and enquired Hoover:

Sir, what is your profession.

Hoover replied:

Sir, I am an Engineer,

The companion was somewhat disappointed, He replied:

Sir, you are an engineer! I thought, you were a gentleman.

Even, as recently as the 1930's, Engineering was not considered a learned profession. You have been gracious enough to choose to honour a person whose profession is mundane and has no glamour about it.

3. Between India and the USA: a special Relationship

The relationship between India and USA is really unique; may I say special. It may even be appropriate if I say '**divine**' because Columbus, in search of gold, wanted to reach India and ultimately, landed in America: It is '**divine**', because Columbus himself believed that he had a divine mission. It is a relationship that is so private that the ups and downs in political policies cannot affect; economic strains cannot disturb; change in the ruling party, either here or in India cannot harm.

I came first to the USA as a student. I was fortunate to study in one of the reputed state universities in the U.S.A. and one of the top departments in civil Engineering. i.e., the Department of Civil Engineering, University of Illinois. It was under an extremely imaginative scheme introduced by the USA. It was then known as Technical Cooperation Mission [TCM], latter renamed by President Kennedy as USAID scheme. I must acknowledge that I am the beneficiary of an imaginative scheme of technical teacher training, introduced by the USA for upgrading the qualification of teachers in Engineering Institutions. In the late 1950's and early 1960's, about 100 scholarships were offered under what was then called 'Technic Cooperation Mission' [TCM]. We were enabled to qualify for M.S., or Ph.D. and later, these candidates blossomed into leaders in technical education in India.

The USA, Mr. Mayor, has emerged as the international capital for Higher Education. You are aware that we live in a period, popularly referred to as the Knowledge Era. Knowledge has become the most dominant economic force.

4. The Economic Divide

The world stands divided into two main camps:

- i. The advanced countries

ii. The developing countries

The term developing countries is a euphemism for poor countries. The divide between the rich and poor countries has been relentlessly increasing. The 19th century has been a century of gradually growing inequality, between countries in the world as a whole; the income gap between the top and bottom countries was [UNDP, 1999] 3 to 1 in 1820; 7 to 1 in 1870; 11 to 1 in 1913. When we come to the 20th century, the ratio of income between the fifth of the world's people living in the richest countries and the fifth in the poorest grew rapidly [UNDP 1999]: 30 to 1 in 1960; 60 to 1 in 1990 and 74 to 1 in 1997.

I may state that in another other form. About 20% of the people living in advanced countries, have access to 85% of the world income; the remaining 80% of the people have access to a mere 15% of the world income. During the 20th century, the world population increased fourfold; but the economy grew 17 fold. But these two developments were not distributed equitably. The growth in economy went to the advanced countries, but the growth in population went to the developing countries.

5. Knowledge: the Determinant

An analysis of the disparity and the deep divide shows three areas of strength in the advanced countries.

- i. Widespread literacy and ability of the people to avail themselves of the advances in S&T.
- ii. Opportunities for gaining supremacy of knowledge in important fields.
- iii. Capacity for creation of new knowledge

These developments have made higher education an important component for social and economic development. The developing countries have concentrated on literacy and underestimated the importance of higher education. Even the World Bank strongly discouraged the developing countries from investing in higher education. The World Bank economists in the 1970's argued that higher education benefits the recipients while school education

contributes to the public good. The World Bank changed its view later; but a little too late.

6. International Students

The rapidly growing knowledge orientation in jobs and the need to develop competitiveness in industry higher education. The developing countries were not able to meet the demand for specialized knowledge. Higher Education became an economic good. Students from developing countries started moving to advanced countries for higher education.

We have today a new category of students known as international students. They were 1.9 million in 2001; the number must be much more now. It is estimated that the number will be about 7.2 million by 2025.

7. USA: The World Capital for Higher Education

There are about 600,000 international students in USA; the income for the nation from the international students in 2006-07 was \$ 14.5 billion. Indian students in 2006-07 account for about 84000 Üõ~èœ ðfèOŠ¹ \$ 2.3 H™Lòj . Higher Education has become an industry.

The USA today is the world capital for university education. It is today the Mecca for advanced studies and research. The Oxford University with 800 years of historyP occupied the position of an icon for standard and excellence in higher education. Even the Oxford University academic community has openly conceded the supremacy of Harvard and Yale universities and has launched an £ 1.25-billion programme to upgrade the facilities.

Students come from all over the world. Irrespective of the nature of Government, whether it is a democracy, monarchyP dictatorship or communist regime, students are permitted or are sent, to study in USA. Communist China is the leading nation in sending students for higher studies in USA. The number is around 68000.

In the field of Higher Education there is a reversal in the process. Instead of the students going to the universities in advanced countries, the universities in advanced countries are physically moving to countries where there is demand.

For instance 14 universities from USA have established campuses in Singapore. Mr. Mayor, your important export material today is education.

8. Opportunities for the Competitive

There is an element of strangeness in this process. We come and learn and qualify ourselves, especially in science and technology and later we use that knowledge to compete with you. In a way, you are preparing your own competitor. Mr. Mayor, you are magnanimous enough to do that: you are also mighty enough to stand that competition. You are an exporting nation; there are many products that you export, but your extremely positive export is education.

9. Education in India Neglect of Vocational Education

A few observations about higher education in India may be appropriate. India is one of the countries that valued education high and attached an overwhelming importance to mental work. One of our weaknesses and the cause for our stagnation and backwardness is our devaluing physical work. We have gradually outgrown that mindset and have awakened to the modern values and have come to recognise and acknowledge the dignity of labour as a nation.

In the Indian work force, only about 9% is in the organised sector. More than 90% is in the unorganised sector. Because of certain lopsidedness in our priorities, only about 5% of the work force in the unorganised sector is trained. The remaining happens to be partly illiterate and the literate ones are mostly untrained. Consequently the productivity of the labour which constitutes 90% of the work force is low. We will not be able to increase the wealth of the nation unless we improve the productivity of the labour in the unorganised sector.

10. British Legacy

I may mention here that though India has a high tradition of education, beginning from the early centuries of the Christian era, the present system of university education is of Western origin. Not only in India, but all over the world, universities have been established on the pattern of universities in Europe and Britain. Irrespective of the system of Government in the countries of the world, the structure of universities is broadly the same among all nations.

The university education in India has been established by the British. We have expanded it; multiplied it; but did not change the structure. We have over the period, appointed many commissions and committees; they have made many valuable recommendations but they have not been implemented. They adorn the shelves in the libraries; often quoted but remain un implemented.

India is a country big in size; steady and stable like an elephant: but does not run fast like a horse.

11. Secular Democracy; Every Citizen a Monarch

Ours is a democracy in the truest sense of the term. Some of you might have heard of the Greek philosopher Pyrrho. There is a legend about him. When he was walking along the road, he found that his old teacher had fallen in the ditch on the side of the road, was badly injured and was struggling to come out. One would expect that Pyrrho would have rushed to pick up his teacher and save him. But Pyrrho did not rush to do that. He started arguing within himself, that considering the age of the teacher, the injuries suffered by him, the treatment and effort needed to restore his health and the benefit that may accrue to the society by saving him at this age. He came to the conclusion that it was not worthwhile to save a person so old and so badly injured and with no benefit to the society and walked along. Mr. Mayor, we have many Pyrrho's with us who have to be convinced of the benefit of every step before we could take a step forward. That is the price we pay for democracy. I may proudly say Mr. Mayor that whatever be our status in literacy, or in our economic status, we are a genuine secular democracy – the only secular democracy in that part of the world. The party in power in India is congress and its leader, really the most powerful leader is Mrs. Sonia Gandhi an Italian by birth, and a Christian by religion in an India that is 80% Hindu. It is possible only in India – the India of Nehru, the India of Gandhi and the India of Ashoka the great.

12. Higher Education in India

I come back to higher education. We have continued the structure initially established by the British. We have what we call the affiliating universities and the affiliated colleges. You will not be able to understand the expression,

'affiliated', since it does not exist anywhere in the world except in India, Pakistan and Bangladesh. It was based on the then existing London University model; but London University had long given it up; but we have not.

We have today nearly 20,000 affiliated colleges and about 300 regular universities. An affiliated college is an educational institution that prepares candidates for an undergraduate or post graduate degree examination. It is essentially a teaching institution. The universities to which these colleges are affiliated offer the examinations, value the answer books and award the degree. These universities, besides conducting the exams, have their own teaching and research programmes.

For a country of 1100 million people and 11 million students, 300 universities are too few. Germany, in Europe, with a population of 85 million has 350 universities; Japan with 125 million has 750 universities. You have in USA nearly 2500 universities. India has a few national institutions, comparable to the best in the world; but they are only a few.

The boys and girls in the age group 18+ entering institutions of higher learning constitute around 10%. This is rather low. The percentage in some of the advanced countries is given in Table 1.

U.S.A	80.90%
Canada	87.30%
Australia	79.80%
Finland	74.10%
U.K.	52.30%
France	51.00%
Norway	62.00%
Belgium	56.30%
New Zealand	62.60%
Source: UNESCO The World Education Report, 2000	

We may have to reach atleast 20% by 2020 if we are to be a developed nation by that time.

13. Research: the Achilles heel

Of the total faculty members numbering 457000 in 2003-2004 about 440000, i.e. 83% are in colleges where research is not done. The total number of full professors is a mere 16000 out of a total higher education faculty of 457000- which is only 3.5%. This is the major weakness of the system.

The institutions of higher learning, i.e., universities are the seed beds of research. Since, in India, higher education is predominantly in affiliated colleges, the research output has been modest – too modest. A comparison with China will be an appropriate means of illustrating this point [Table 2]

Table.2: Research Publication with Citation

	1980	1985	1990	1995	2005
China	692	-	6991	-	72362
India	10606	-	11563	-	25227

14. National Knowledge Commission:

The P.M. of India has appointed a National Knowledge Commission to go into problems of Education and Research in all areas of knowledge. The Commission has recommended that the number of universities should reach 1500 by 2015 and the age group entering the portals of higher education must reach 15 by 2015. What is contemplated is a massive expansion of universities and transferring higher education from college campuses to university campuses; moving from academic year pattern to semester system; changing from external examiner system to continuous internal evaluation.

15. Mini Revolution Major Revolution

It is said sir, that a society should make periodically minor revolutions or it must face a major revolution. In the field higher of education we have failed to make minor revolutions; we are therefore seriously preparing ourselves for a major revolution.

I thank the Mayor and the Oak Ridge City Corporation Councillors for the honour they have done me conferring the Honorary Citizenship of the City of Oak Ridge. I do cherish this honour and entertain it with a sense of legitimate pride.