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# Envisioning education systems for the future

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*(Extracted from a public lecture at the Institution of Engineers)*

We cannot deny that education forms the basis of economic progress. But it requires increased investment over a substantial time period. It is something that many people shy away from admitting. Although we have had significant initiatives brought in through UNESCO and we have had World Education Forums in many parts of the world pledging that initially by 2000 and subsequently in 2010 and 2015 we would ensure universal primary education and so on, have we come anywhere near this achievement? Many noble goals are set, many conferences are held, lot of documents are prepared, lot of discussions take place but giving a good quality education to the child within the classroom is still far from reality.

Let us look at ourselves critically and dispassionately.

We, in Sri Lanka are endowed with a highly valuable human resource. Like I said before we enjoy the highest literacy, numeracy and primary school enrolment in South Asia. We also boast of high levels of female literacy, low levels of maternal and infant mortality and we boast of our high life expectancy, which is on par with developed nations of world. In fact we are ranked 89 out of 173 countries in the human development index compiled by the UNDP. This means that although we are a country of medium level human development we possess remarkable indicators in education and health, comparable to those countries listed as having high levels of human development.

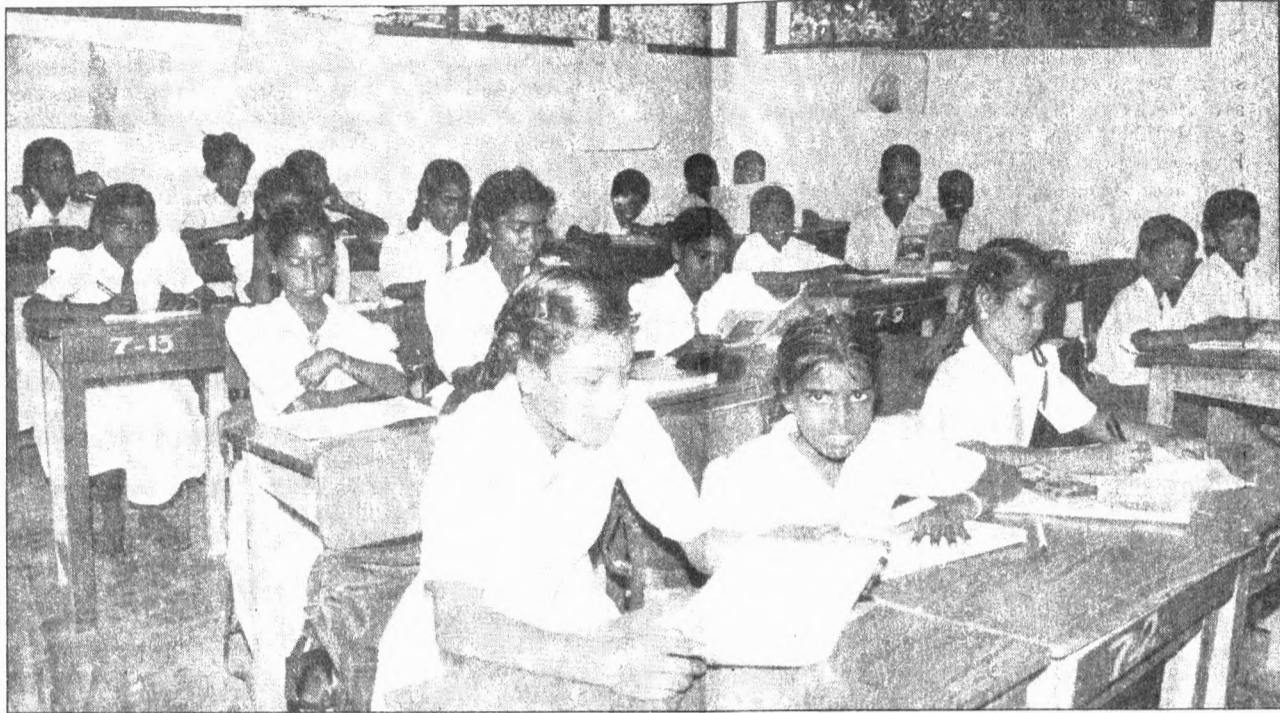
Having said that we must also admit that we can boast of certain statistics which rightly brings us shame.

This is particularly so in the case of higher education. Sri Lanka is perhaps the only country in South Asia and also perhaps the only country in South East and West Asia, with the most appalling enrolment in universities and the other higher education institutions. While we have a university participation rate of about 3% of the specified age cohort, countries like India have participation rates of over 8%, Thailand about 15% and South Korea has an extraordinary rate of 68% of the young people enrolling in higher education. Australia, with our identical population has nearly 700,000 students enlisted in universities. Even Bangladesh and Nepal have better statistics than we have.

The traditional universities in Sri Lanka continue to absorb just a handful of students each year. I believe in April 2002 about 198,000 students sat the A/Level Exam and about 98,000 qualified for university entry. But out of this group only about 12,750 entered the traditional university system. This is indeed a reason for regret and a point for deep consideration.

We have also recognised that the demand for higher education by young people has increased steadily. And those who are disappointed join the frustrated thousands on the streets. It is they who get lured for varied political and other non-productive activity. It is the duty of the governments in-charge to create environments conducive for expanding high education opportunities for the rich and the poor alike. Although we have successfully increased the places available in the state universities (from about 20,000 in 3 universities in the 1960s to about 60,000 today in 13 universities) it is certainly not adequate to meet the present day demand. Nor have we kept pace with the increasing population or with the advancing times.

What is needed today is re-thinking and restructuring the education system to meet the future trends. Whilst ensuring a good quality primary edu-



A local class room - much emphasis on cramming

cation, it is critical that secondary and tertiary education are geared for technological development meeting with the emerging job demands.

A good quality university education creates a group of highly skilled individuals. It is also at the heart of creating national capacity, to adopt technology according to the needs of the country. Increasing the quantity of education is not enough. It is the low quality of secondary schools that leads to low completion rates in any country. And thereafter low university enrolments. Korea and Singapore built high university enrolments based on high secondary school completion rates. In the internationally comparable tests in mathematics, students in Singapore, Korea and Hongkong show the highest achievements.

South Africa and Colombia by contrast perform significantly lower than the international average. Differences across countries reflect differences in incomes. But that is not the whole story. Korea ranks higher in test scores than countries with thrice its GDP per capita. Countries like Norway for instance. The secret for Korea's success is its consistent high investment and high enrolment in secondary and tertiary education.

Today the terrific development of information and communication technology has made it critical to teach basic computer skills to every child. But the biggest concern for a country like ours is the lack of resources, both financial and human, to ensure adequate equipment and efficient teaching of such skills. A computer costs much more than the annual income of the most people in some developing countries. Yet ICT also provides new possibilities for improving the quality of education at low cost. And there has been a proliferation of imaginative attempts in developing countries to stretch new technologies to education institutions in cost, effective ways.

Today in many developed and developing countries technologies such as CD-rom, radio and cable TV, combined with the internet, extends the reach of education for children in the rural parts of the country who don't have access to all the material needed. Many universities in developing countries are testing and even implementing web-based education systems and are using internet tutorials. Many countries have accepted the concept of a virtual university using the internet as a place for students and teachers and researchers to meet. Open and distance learning has now come to occupy a major seat in the 21st century education systems across the globe.

An important indicator for successful higher education systems is the rate of enrolment in technical subjects and in science, engineering, mathematics and computing. Some

developing countries have had a great success in raising such enrolments. For example, out of the 3 M students enrolled in colleges in the four East Asian tigers (Hongkong, Republic of Korea, Singapore and Taiwan) more than one million were in the technical field. China and India both have a million students enrolling in technical subjects. These large enrolments in technical and technological subjects generate the required critical mass of skilled personnel.

But there are stark disparities between nations. While gross tertiary enrolments in science and technology was 23% in South Korea, it is only something like 1.1% in Botswana. Tertiary education is expensive. It is too expensive for poorer countries. These lead to some difficult policy decisions. What skills can you offer children while at home?

Which skills would countries acquire by sending students abroad? Which subjects require public resources and which can be provided by private financing?

The logic of government financing for primary and secondary education is indisputable. But public financing does need to be targeted in the case of post secondary level education for certain critical fields in which technological innovation and adaptation will generate large spill over benefits for the society as a whole. Although most developing countries already devote substantial public resources to education, many countries around the world find that they need to finance skills development, through a mix of public-private finance.

Having said all what I did, let us reflect a moment.

In the past several minutes, I stressed on several needs.

- \* ensuring a good quality education for all children in all parts of the country

- \* rewarding and recognising teachers

- \* the need for increased funding on education

- \* for increasing post-secondary enrolments in universities and other good quality higher education institutions

- \* for establishing quality assurance
- \* for emphasising science and technology and ICT

- \* open and distance learning, the world wide web and virtual universities.

Let us take a step back from our rhetoric in envisioning education systems for the future. Are we being over ambitious and unrealistic? Are we only dreaming the impossible dream?

If we all made a personal 'wish list' for the future of learning for your child or mine, what would it be?

I would like to quote from the writings of a highly perceptive father, who I felt had put his finger at the heart of the matter.

His wish list was:

- \* Let us switch from teaching to learning, and discard the perception of schools as exclusive centers of learning.

- \* Let parents become more closely engaged in their children's learning, not simply as providers of sustenance, but as partners in a learning process that involves both home and school.

- \* Let us increase the range of career choices that our children can aim at.

- \* Let there be less emphasis on cramming and passing exams, and more on developing skills, attitudes and values.

He said he cared less about filling classrooms with analog or digital material - he wanted a more fundamental change in approach and process.

How right he is?

Here we are as a nation, waxing eloquent about equipping every school with an IT Lab - when 3,000 schools don't have electricity.

What use would be a multimedia computer to a school with a leaking roof or perhaps no roof at all.

We are a nation that has to debate extensively on an issue so basic and fundamental as re-introducing English medium instruction as an option, where bizarre arguments are forwarded by the very people whose children have already studied in the English medium - in Sri Lanka or overseas.

We are a nation with an education system so overtly politicised that the class room size depends on the orders the principal receives from his/her political masters.

We are a nation where teachers cannot be transferred and deployed to better stations without a 'yes' from the higher ups.

So why do we keep on putting off the basics, missing one golden opportunity after another? The victims are the kids who will never get another chance, ever again, in their life time.

Ladies and gentlemen, I too have a wish list.

Before we go into web-based learning, internet tutorials and establishing a virtual university, may be one day we will have the courage and vision to free education from the shackles of the bureaucracy and the political structures that have created this retrogressive system.

May be one day we will see a modernised system in this country, with well equipped schools and a highly professional teaching cadre, where a child engages in truly child centered learning.

May be one day we will remove these handcuffs and true autonomy will be restored to our schools and universities. Then we can envision the kind of education you and I would dream of giving our own children.