University of Madras

National Seminar on Higher Education in 21st Century

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Inaugural Address by Prof. V.C. Kulandaiswamy

I am really happy to participate in this pleasant function. I must congratulate the Department of Education, University of Madras for having organized a National Seminar on Higher Education in 21st Century.

Education is not a static phenomenon. It is an organic entity which keeps changing to meet the emerging demands and suit the new environment. It may be worthwhile to trace briefly the evolution of education. The agricultural society started with Gurukula System, where the students learnt at the feet of the master. The academy of Plato and the lyceum of Aristotle in Athens were the Greek version of the Indian Gurukula System.

The economy of the agriculture society depended on craft obtained through training and not on literacy and knowledge. When the society moved to the stage of industrial civilization literacy became necessary to use the developments in technology and later in Science and Technology. The knowledge gained through learning was used to make tools and to replace craft with technology. The Gurukula System was found inadequate to meet the demands of learning in certain disciplines where a single teacher cannot teach all the relevant subjects. The system was also found inadequate to meet the manpower demands of Industrial economy. It was under these circumstances that the class room system came into existence. **It did not replace the Gurukula system, but took over the new demands on education.**

After the industrial revolution, craft was replaced gradually, but steadily by technology in all areas of activity. Consequently the productivity increased. The major difference between craft and technology is the difference in productivity. In the industrial economy, productivity increased in general. It is increased productivity that characterizes the economy of advanced countries. Education seems to be the only area where productivity as such has not increased in the last 200 years. While

the content of the syllabus changed form time to time as knowledge advanced the conduct of class room instruction remained the same.

As Science and Technology advanced, the need for educated manpower further increased and such concept as universal primary education came into existence. With the passage of time increasing number of boys and girls started knocking at the doors of the universities. The modern society realized the need for providing educational opportunities for the economically disadvantaged, socially backward and physically handicapped persons. As technology advanced obsolescence set in fast and re-education became necessary in all fields. Continuing education emerged. as an important area of education. The conventional class room system was unable to meet the new and diverse demands on education. A new system with higher productivity and flexibility to meet the new demands became necessary and distance education came into existence. It is the **third stage in the evolution of education and marks the entry of technology and increase in productivity in education.** As teachers you have to be fully aware of the course of these developments.

The class room instruction is a simple straight forward one: What is required is knowledge in the subject and ability for oral communication. Distance education is based on multi-media approach. You are aware that in distance education, the teacher is separated from the students. What does the separation mean? It only means that there will be no direct interaction between the teacher and the students. The academic community has to device methods to ensure that the effect of interaction is achieved inspite of the fact that the instructor and learner do not meet each other. The multi media approach aims at fulfilling this requirement.

The distance education itself has gone through 3 or 4 generations. Initially it was correspondence education. Strictly speaking writing instruction material for correspondence education is an art and a science. Both the conventional system and the distance education system depend on class room instruction and self learning. In conventional system it is predominantly class room instruction with limited self learning. In the distance education system it is predominantly self learning with minimal face to face instruction. Therefore preparation of instruction material for distance education is a professional job and is vastly different from text

book writing. From correspondence education we moved on to the use of Radio, Television and Computerised Material: this is addition to written texts. The third stage was the use of audio - tele conferencing, one way video - tele Conferencing and two way video - tele Conferencing. The fourth generation is what we now have as online learning. Online learning is coming into existence very fast. It has far reaching consequences for Higher Education.

All of you might have heard of the name of Peter Drucker – a great management specialist who recently passed away. Talking about the future of education, he made the following observation:

> **"30 years from now the big university campus will be a relic. Higher Education is in deep crisis; the college won't survive as a residential institution. Today's buildings are hopelessly unsuited and totally unneeded"**

The spirit of this statement is that substantial part of higher education will take place online. Digital libraries will replace the book shelves. Student's will remain, where they are and learn their lessons which will taken to them. Conventional class rooms and hostels will become rare phenomena.

It is no doubt too optimistic a picture of the future of online learning: but it is reasonably realistic. Teachers can no longer be content with their instruction notes and class room communication. They have to meet the demands of technology and such changes as may be brought about in the field of education. One consoling fact is that whatever be the revolution that may come about two components will remain for ever: one is the teacher and the other is the learner - they will be: there everything else may change.

Another important development that has a bearing on teaching profession is the emergence of knowledge as a resource. The 20th century has seen momentous developments in nuclear physics, space technology, life sciences and most important them of all in information technology and communication Technology. But the real breakthrough has been the blossoming of knowledge as a resource. The use of knowledge in the economic world is to increase productivity. Knowledge was used to design tools that helped to increase productivity. Later, knowledge was used to organize the methods of production to augment productivity. Industrial

Engineering and Production Technology are examples of such organizing. Knowledge was used to organize human resources in a manner that would increase productivity. Management engineering is an example of such development. More than all these knowledge, was used to increase knowledge; that is what we do, when we do research. In research we make use of advanced knowledge to further advance the frontiers of knowledge.

I referred to the emergence of knowledge as a source. Since Education is the creator of knowledge, education has come to occupy the centre stage as never before, Knowledge as a resource has an economic value. Since knowledge by itself has an economic value, education the creator of knowledge has become an economic commodity, Education therefore has become one of the marketable goods. This has resulted in private entrepreneurs entering the field of education.

Private participation has been there in education for long; but it was a matter of philanthropy or private efforts subsidized by the Government; but now self financing institutions have come into existence.

Advanced countries have now started looking at education as an industry. In the year 2000 there were 1.8 million international students which mean students studying in a country other than their own. It is predicted that this number will increase to 7.2 million by 2025. In 2003 - 2004 there were 5 lakhs of foreign students in USA and the US income from students, who were supporting themselves was US $ 13 billion. You may compare this with the export value of the software in IT industry in that year from India which was US $ 12.5 Billion. The United Kingdom got 5.6% of it's GDP from overseas students. Australia, with a small population gets about Australian $ 4.2 Billion which amounts to 5.5% of its GDP. Singapore looks at education as one its important industries and has been planning massively for developing the country as a global hub for Higher Education.

All these developments throw great challenges, I must refer to one more phenomenon, that is the phenomenon of private participation in education. As I mentioned earlier, private participation is nothing new. It has been there for long in many of the countries. In the USA out of 2365 universities 1750 are private. In Japan out of 684 Universities 512 are private. It is said, that even in a country like China there are over 800 private universities, but all these may not totally depend on

tuition fees; but today we find the emergence of completely self-financing institutions. This also brings in new dimensions.

The academics cannot confine themselves to their lessons alone. They have to also take note of the macro level developments that are taking place in education. It certainly brings about new challenges and new opportunities. There is today a great demand for academic talents and research capability. Teaching certainly offers bright career opportunities. Teachers have to prepare themselves for a new world.

Whatever may be the nature of changes there are certain qualities, certain characteristics, certain requirements that are permanent.

1. Whatever be the subject of your teaching you must endeavour to develop in the student community a national pride. In our case we have certainly many things to be proud of and the students must be aware of them.
2. Secondly you must motivate the students. Your class room instruction must both motivate and instruct; even your university campus can be a motivating factor. I may give you one example. In the Pokang University in South Korea, in front of the main building, there are six pedestals; in 4 of them there are statues of Einstein, Newton, Maxwell and Edison. The other two are empty. But it is stated in the pedestal that these are for future Korean scientists. It is one way of telling that every one of you must aim at becoming an Edison or Maxwell. The University also has a garden. It is called Nobel Garden. During an important function of the University, they had as invitees, ten Nobel scientists from all over the world. The scientists who participated were asked to plant trees and they were names after them. Some more trees were planted and they were reserved for future Nobel visitors and the garden itself is called Nobel Garden. It is an example of creating in environment in the university campus that has an element of motivation.
3. Thirdly I need not say that every teacher must be a scholar; must endeavour to be a scholar and well informed in the subject.
4. Fourthly I may inform you that even at the University level, the students try to emulate the teachers and you should set an example for enduring virtues like cleanliness, punctuality, purposefulness and general concern

for social welfare. Some of these are traits that a good teacher can radiate across the class room of the campus.

5. Lastly and most importantly you must love your students.

Before conclusion I may point out a deficiency in the academic profession. We do not have academic leaders. If you take industry there are well recognised industrial leaders. You take politics, there are too many leaders striding across the nation, with the mantle of a leader. Even in the field of literature there are well reconginsed names: but If I ask you to mention the names of few academic leaders, you may not come out readily with a list of names. We need to develop academic leadership like the Confederation of Indian Industry [CII], the Federation of Indian Chamber of Commerce and Industry [FICCI], and the National Association for Service and Software Company [NASSCOM]. We must have something like a **National Academy of Higher Education** consisting of eminent academics, academic administrators, providers of education and employers. This body must periodically evaluate the state of education, identify the strengths and weaknesses and advise the Government appropriately.

All of you are teachers who have come from different parts of the country.

- It is good by itself for professionals to come together for a discussion. It is better still, if that would bring about a good friendship between them.
- Friendship between persons is good; better still if that would lead to partnership between the institutions they come from.

Hoping that the association and discussions will lead to such enduring results, I have great pleasure in inaugurating the National Seminar on Higher Education in 21st century. I wish the seminar all success.