Inaugural Remarks by Former Ambassador T.P.Sreenivasan at the Seminar on Technology Enabled Education at the Chinmaya Institute of Technology at Kannur, Oct 20, 2014

I am grateful to Dr.K.R.Srivathsan and his colleagues for organizing this timely seminar on technology-enabled education. This is a matter of high priority for the Kerala State Higher Education Council, which has set up a Committee on IT@Colleges, of which Dr.K.R.Srivathsan is a leading member. The Committee has a two-fold agenda. The first is to assess the IT assets that our educational institutions have to enable them to make optimum use of the different platforms available and to provide additional facilities to them. The second is to design the necessary content to facilitate the use of the platforms in accordance with the syllabi of our universities. I hope that the present seminar will provide the necessary inputs to our Committee. As is well known, the key to effective use of technology in education is the design.

A year ago, the KSHEC organized an International Meet on Transnational Education and issued a Thiruvananthapuram Declaration, which emphasized, among other things, the need to popularize MOOCS in the state to fill the gap between the knowledge of the teachers and advanced knowledge, which is freely available in cyberspace. We faced some criticism from high places, which pointed out that India did not have either the connectivity or even the electricity to use MOOCS. What we had suggested was not to replace traditional education with MOOCS, but to use MOOCS as tools to supplement classroom education. Today, however, there is recognition of the central role of MOOCS in higher education. The President, the Prime Minister and the MHRD Minister have spoken of MOOCS as an essential tool. Dubbed as SWAYAM, (Study of Webs of Active learning for Young aspiring Minds) MOOCS have been generated in India with the involvement of UC Berkley and IIT Mumbai.

In our own way, we have incorporated MOOCS in our teachers training programmes and held several workshops. Together with the University of North Carolina, the Mahatma Gandhi University has held a MOOCS programme for University students. Since we propose to move rapidly in this direction, we need to create the necessary content to suit our curricula.

Distance learning is not entirely new and different forms of distance learning have existed for long. Educational films were produced as early as 1910 and Thomas Edison said in 1913 that there is no branch of human knowledge, which cannot be taught with motion pictures. Technology has transformed education in the last ten years and in the next ten years, it will reach

unprecedented levels of innovation. India needs to catch up with these developments to keep our higher education relevant, competitive and efficient. Technology and education can promote each other, if they are used with reason and vision.

The variety of learning tools available can be used to enable the teachers and the students to use online resources and to develop research skills. Flipped classrooms have proved effective and technology is particularly suited for Math, which is fundamental to the growth of technology. Unless our universities specialize in research and create knowledge, rather than gather information, we can never reach the world-class levels of education we aspire to. We do not have world-class universities in India not because they are poor, but because the criteria used are applicable more for research universities, not teaching universities.

Some say that universities, the way we know them, will disappear with the growth of technology. I do not subscribe to this view. Learning cannot be imparted by machine alone. Interaction with teachers and peers are extremely important to embellish education. Resources available in cyberspace should be used with discretion and on the basis of mentoring by teachers.

Nobody can be enthusiastic about technology without being skeptical at the same time. We cannot take effective technology for granted even in the advanced countries. Failure of technology has resulted in heavy losses, not to speak of the embarrassment it causes to technologists. I have seen technology failure in seemingly minor technologies even in MIT and NASA. Once I was with Ambassador (later President) K.R.Narayanan at MIT and when he stood up to speak, the microphone failed. Ambassador Narayanan said that if it had happened in his village, it would be called "third world technology", but since this is MIT, we can only call it "system failure!" On another occasion, when Kalpana Chawla was about to take off on her first shuttle mission, I was told I could greet her from the NASA headquarters. The system failed and later, we discovered that someone had unplugged the device under the table! If such things can occur in MIT and NASA, how can we rely on technology in the conditions that exist in our universities? The answer, of course, lies in the mastery of man over the machine. Needless to say, we have to reach higher levels of technology to use it uninterruptedly on the education scene.

With these words, may I inaugurate the Seminar and wish it every success? We have a major stake in your success as we propose to use your conclusions in reforming education in Kerala.

Thank you.