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I am indeed delighted to be with the Shivaji University, Kolhapur to deliver the 36th Annual Convocation Address. May I thank the Senate of the University for giving me this opportunity. I am happy to know that Dr. Anil Kakodkar and Shri. Chandrakant Mandare has been rightly selected for the Honorary Degree of D.Litt. My greetings to all the graduates, scientists, artistes, guests and the faculty.

When I entered the office of your Vice-Chancellor, I saw an impressive bust of Shri. Shivaji Maharaj after whom your University has been named. By the side of that statue is the emblem of the Maratha State which reads :

प्रेतचिंद्रलखिचि
वेर्धण्णुर्व च वेर्दता शाहस
नाः शतस्यैषा मुद्रा
भद्राय राजतर् ॥

In English it means 'this is the emblem/seal or Rajmudra of Shivaji Maharaj whose 'Empire of Freedom' keeps growing like the moon of Pratipada – the first day in the fortnight of the enlarging moon'.

What a great visionary and builder of the Maratha power Shivaji Maharaj was. His benevolent rule guaranteed everyone freedom from fear, from want and from oppression. I pay my humble tribute to the memory of Chhatrapati Shivaji Maharaj. We all, specially the youth must take inspiration from his life and work.

The topic which I have selected for this important Convocation is "Developed India". Independent India was born in 1947 with a label attached that it is a "developing country" pointing the fact that it is not economically strong enough; there is a high dependence still for defence systems. India has no world standing among the comity of nations, inspite of its size and potential. Therefore, the question arises as to how we physically and spiritually remove this label of 'developing country' and how can it become a 'developed India' in two decades of time. Independence was the first vision realised by the nation and its people. On that foundation we need to build the second vision of becoming a developed India with national, economic, food and social security.

Developed India –How to realise ?

With this vision of Developed India let us look at what India should do to reach that status. It is a second major movement for the country after the great independence movement. In a national movement everybody has a role. From the Technology Information, Forecasting and Assessment Council (TIFAC) document “Technology Vision 2020”, five thrust areas emerge around which we can take several econo-technological actions involved in such a movement. These are

- (1) Agriculture and food processing,
- (2) Reliable and quality electric power for all parts of the country,
- (3) Education and healthcare
- (4) Information Technology
- (5) Strategic sectors.

These five areas are closely inter-related and our concerted efforts in these areas would lead to national security, food security and economic security.

Integrated action

I wish to suggest how each and every Indian, in different walks of life, can contribute towards realizing the vision for the Developed nation. I had discussions with economists, agricultural experts, technologists from different fields, from industry, government, administrators at various levels, non-governmental professionals and activists, media persons, and political leaders at different fora. After discussions, I feel concerted efforts in the five areas mentioned earlier can lead to a major movement toward transformation of the nation.

The vision for a developed India is driven fully by economic development coupled with security needs of the nation. It is also important that the intellectuals of the nation are also equally reinforced. What it means is : India, due to its ancient civilisation, inspite of over-powering from various invading nations, the intellectual wisdom needs to be sprung back, matched with Indian value system. The intellectuals’ mighty minds, built in self-confidence with compassion for the service to poorer section, are the most important demand for a developed nation – happy society.

Self-reliance in technology and national strength

I would like to share with you certain experiences, I had the occasion to participate and understand. This happened in a year’s period. On 11th May 1998, the Chairman, Atomic Energy Commission Dr. R. Chidambaram and myself and some of our team members including Dr. Anil Kakodkar were working for the results of the underground nuclear test followed by another two. We were at very close to the test site and the countdown was progressing. At T-5 seconds and

hundreds of parameters from instrumentation were displayed. The mission was to take place in a few seconds. At the T-O event, we witnessed the whole earth shrugged, thundered in front of us and all around. We saw part of the earth raising. What a powerful energy India generated through nuclear weapons? This successful mission was the great partnership of DAE and DRDO. Self-reliant technology made the nation to become a nuclear weapon state.

The second event has to do with a missile system. On 11th April 1999, AGNI-II took off with computer command from the beautiful island range. 600 parameters were monitored in real time through a series of radars and telemetry stations and ship borne instrumentations interlinked through our own communication satellites. The AGNI with its payload reached with close accuracy on the target 2000 kms away. The partnership of DRDO laboratories, academic institutions and industries brought this important success and it is triumph for self reliance, inspite of the technology denial by the super-powers.

Another event is about India's rocket technology. It reached its prime when the ISRO launched successfully the operation Polar Satellite Launch Vehicle on 26th May 1999. The PSLV, that has the third largest booster in the world, and above all the ISRO reached a stage of integrating its own satellite IRS, a German and a South Korean satellite. India can thus compete in the launch vehicle programme for launching other countries, satellites also. This is the result of the prudence of a great visionary Prof. Vikram Sarabhai who always emphasised on self-reliance.

Another area of India's core competence is the Information Technology. Within five years' time, our software product potential has increased from a few hundred million dollars to a four billion dollar; and more than half of the software products are exported. Some of our software companies have been recognised as equal professionals in various software export houses in the world. All these events, I am narrating to the young community because, if India decides and work for it we can do it, and India can indeed be a 'Developed Nation'.

When TIFAC brought out the "Technology Vision – 2020" Document evolved by 500 experts and which was submitted in 1996, one major question often asked was, the tasks are bigger and people are not yet geared to the same dimension. The nation is still not prepared how such a vision of developed India can be accomplished. Nationally, we have core-competence in multiple areas : materials, water resources, design competence and vast human resources. Whenever we decide upon a certain critical technology, India will do it and India has done it. For the realisation of 'the Vision', two important factors have to enter into our psyche

and minds. They are: The self-reliance in thinking and actions and a national decision that India should become a developed nation.

Conclusion

I can see all around doubts with our loads of problems in science, technology, healthcare, infrastructure etc. When I think of how to transform India from the 'developing nation' to a 'developed nation', it makes me to narrate two of my experiences. After one of my talks at Hyderabad, a ten-year-old girl came up to me for my autograph. I asked her, "Young lady, What is your ambition?" "Uncle, I want to live in a developed India", she replied without hesitation. Also, I would like to quote Sir C.V.Raman, at the age of 82, while addressing young graduates said : *"I would like to tell the young men and women before me not to lose hope and courage. Success can only come to you by courageous devotion to the task lying in front of you. I can assert without fear of contradiction that the quality of the Indian mind is equal to the quality of any Teutonic, Nordic or Anglo-Saxon mind. What we lack is perhaps courage, what we lack is perhaps driving force which takes one anywhere. We have, I think, developed an inferiority complex. I think what is needed in India today is the destruction of that defeatist spirit. We need a spirit of victory, a spirit that will carry us to our rightful place under the sun, a spirit which will recognise that we, as inheritors of a proud civilization, are entitled to a rightful place on this planet. If that indomitable spirit were to arise, nothing can hold us from achieving our rightful destiny."*

That was a saintly saying to the young. Friends, I request all who are responsible for the young, all who are creators of the young, for their children's growth, allow them to dream. Dream, Dream, Dream. Dream transforms into thoughts and thoughts result into actions. I would like to emphasise here that the strength of youth is greater than that of the Atom Bomb !

Whenever there was a challenge, we seem to perform well. We fought against the sanctions and technology denials and proved to the world that we can do high technology in this country. That means, the inherent strength of Indians, come out on such occasions, like the independence movement. That is why we need a second vision. "Developed India" will be a reality by mounting a "National Movement". Everyone of us has a role to play in this noble cause. Once again I offer my best wishes to the young graduates and urge them to dedicate themselves to the task of building "Developed India".

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