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Shivaji University, Kolhapur

53rd Convocation Convocation Speech

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Govt. of Maharashtra

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Address by Anil Kakodkar

Prof. Devanand Shinde, Hon. Vice Chancellor, Shivaji University Kolhapur, members of management and academic bodies of the University, faculty, staff and students of the University, distinguished invitees, ladies and gentlemen. Let me at the outset, express my gratitude to all of you for the invitation to be a part of this convocation. I have been fortunate enough to be associated with this University and still remember the day when I was honoured by the University with a *honoris causa* doctorate.

Allow me to express my greetings to all of you on the occasion of the 53rd Convocation of the University. Convocation is a special day in the calendar of a University. It marks the culmination of a phase of learning and after having satisfied that the student is now ready to face and contribute to the world at large, as a worthy knowledge empowered professional in the chosen domain of learning and training, the teachers give the final advice and blessings for further journey that student is embarking upon. It is a solemn occasion for the students and also the teachers. The bond between the teachers and the students that is built through years of mentoring brings in an emotional content to the Convocation day. I wish to use this occasion to thank the faculty who in their own way have contributed to shaping the young minds while they are with the University.

My congratulations to students graduating today. You have gone through your respective courses of studies and have been adjudged to be worthy of the degrees

that are being awarded to you. You are now ready to face the exciting world out there. Looking at the present situation in the country, one can say that there are great opportunities as well as important challenges that await each one of you ready to embrace these opportunities and take up the challenges. All of you have to be an important part of the nation building process through your respective capabilities that you have acquired here. Today there is ample scope for innovation and entrepreneurship. The way our country is moving forward, the opportunities for the capable ones will continuously expand. I wish all of you graduating today a very successful career ahead. May all your dreams be fully realised.

Today, I wish to discuss fast changing higher education paradigm on this convocation day. To start, let us take stock of some relevant data. According to Census 2011, of the 121 crore Indians, 83.3 crore (68.8%) live in rural areas. The Centre for Monitoring Indian Economy has estimated the average income of rural households in the year 2012-13 at Rs. 116,672 which was about half the average household income in urban areas. According to socio-economic and cast census 2011 (SECC 2011), manual casual labour (51%) and cultivation (30%) constitute the main source of income in rural households. About 9.7% of rural households run on salary income. 56% households are land less. With more than half the rural households being landless and engaged in manual casual labour for their primary source of income, clearly, we need to look at a development model for rural areas that goes well beyond agriculture and is capable of providing earnings comparable to urban areas over a much broader spectrum of activities including manufacturing and services segment. The relationship of this rural development model with the urban domain should be in a sustainable win-win mode. Luckily, knowledge era has brought in relevant opportunities in this context. Knowledge technologies support democratization and decentralization, enabling people in villages to take part in globally connected manufacturing and services activities. There is thus no reason why rural income should not match or even exceed urban income, provided our higher education system can do capacity building of rural youth at scale and quality that is necessary.

We often here people lamenting on low global ranking of our higher education institutions. On the contrary, we should be celebrating the fact that IITs rank fourth

in terms of producing founders of start-ups worth more than a billion dollars as can be seen from table below.

Stanford University	51
Harvard University	37
University of California	18
Indian Institute of Technology	12
Massachusetts Institute of Technology	9
University of Pennsylvania	9
University of Oxford	8
Tel Aviv University	7
Cornell University	6

Source: SageGet the data

Equally important is to recognise the fact that India ranks first among countries that provided immigrant founders of billion dollar start-up companies in USA as per National Foundation for American Policybrief, March 2016.

It is thus clear that higher education institutions in India can in principle excel in terms of capacity building of youth for creating economic value at a global scale. If this can happen at IITs and a few other institutions in the country, there is thus no reason why it cannot happen in most of our higher education institutions. Further, the billion dollar start-ups have grown in USA and not in India. This also underscores the need to improve our governance system that nurtures the necessary

innovation ecosystem alongside everything that we must do to transform our higher education set up. Luckily, there seems to be awareness about this issue and one hopes that this would get translated into right strategies and actions.

To my mind this is also a cultural issue as it is an issue of enhancing excellence in our education, research and innovation ecosystem. Realising such an excellence along with access to large numbers spread widely including in relatively difficult to access locations is a bigger challenge. Let us discuss the issues involved one by one.

I strongly believe that, for students in higher education system to be fully equipped to be able to effectively engage with development and growth processes in the society, the nation and the world at large, we must pay simultaneous attention to multiple layers of learning. These layers include,

- 1) Learning all the way up to the frontiers of knowledge in chosen subjects in an ambiance of research that continuously pushes those knowledge frontiers forward,
- 2) Gaining proficiency and hands on skills in procedural knowledge related to chosen areas of new creation, services and other socio- economic-cultural activities, and
- 3) Engagement with society and environment in the context of learning being pursued and exposure to basic human values.

Unfortunately, today most of our education institutions do not provide a comprehensive ambiance for these layers of learning. Moreover, there are barriers for students to benefit from such a holistic learning experience through participation in all these layers simultaneously.

A time tested way to facilitate a holistic learning environment is to link imparting of knowledge with socially useful productive work (SUPW) while in our education institutions. Through this mode, the education domain can simultaneously contribute to capable human resource as well as to new inputs for our society as well as our industry through:

- 1) New innovations based on latest knowledge acquisitions ahead of others. This would create a superior edge for our country in terms of new products and processes giving us a competitive edge in the global market,

- 2) Linking knowledge institutions to ongoing socio-economic activities in business/industrial entities to overcome obsolescence issues and maintain/regain their competitiveness and
- 3) Exploring issues of development of strata at or nearer to the base of socio-economic pyramid and devise as well as implement solutions to minimize disparities in our society.

I do believe that linking education and development this way would significantly enrich higher education while at the same time paving the way for development on a more sound footing in a bottom up mode.

Today, our total expenditure on R&D in India is comparable to or larger than countries like Israel, Canada, Sweden, UK, Switzerland, Finland etc. and our spending in R&D per full time equivalent scientist is also comparable with countries that have highest spending in this regard. India should thus have been a technology super power at least comparable to countries listed above. Unfortunately, barring a few exceptions, we are still very dependent on other countries for our technology needs. While there is definitely a need to enhance our R&D spending, the need to bring in better resource use efficiency and accountability in terms of outcomes in our S&T system is perhaps equally, if not more, important and urgent. This is a challenge that our knowledge institutions and our industries must meet at the earliest.

It is important that our research is driven by important problems rather than just pursuing what can be done or what is more fashionable. Handling important problems – and they may be important either in knowledge context or in technology context - by and large would need a multidisciplinary approach involving a large number of researchers or teams working together. In either case, where ever possible, there should be translation of new research findings to new technology products. The ecosystem for this purpose should also involve entrepreneurs along with other professionals capable of supporting such a translation effort. While there are some efforts in this context at a few Universities in the country, much more needs to be done.

Whatever we have discussed so far is equally applicable in the rural context as it is in the urban context. However, we have a much wider gap to bridge as far as rural areas are concerned. Our education and research system should also explore

opportunities to engage in R&D of relevance to society particularly in rural areas. There are many possibilities of technology being brought to bear on societal issues. Low cost hi-tech solutions capable of meeting the needs of poor people in remote and rural areas are becoming increasingly important for a country like India and many other developing countries. Such solutions should be capable working within the expertise of local people rather than high level experts who are unlikely to be available locally. This is of particular significance in the context of agriculture and rural development. Our students getting exposed to such developmental activities would not only give them a good problem solving experience but also emotionally bind them with India in true sense.

I have been promoting the concept of Cillage, a knowledge enabled bridge to close in the opportunity gaps between cities and villages. The concept involves a higher technical education institution in a rural domain becoming the host for technology awareness, capacity building, problem solving and new technology development with full engagement of local people, faculty, staff and students. Such an eco-system would ensure up to date technology, its continuous rejuvenation and most importantly enhancement of livelihood through the use of technology including in areas outside agriculture and related value addition. Such an ecosystem can also facilitate technology enabled enrichment of school education along with benefits of SUPW as a result of first hand practice with latest technologies. Establishment of Science Innovation and Activity Centers accessible to school students would further enhance the spirit of innovation among school children. Participation of college students in these activities establishes direct contact between school and college students with benefits for both.

A Cillage thus becomes an ecosystem where creative researchers would work to resolve problems in rural areas through globally competitive research as well as neighbourhood outreach, local people enhance their livelihood through adoption of new technologies, schools in the area benefit through inculcating innovation culture in the context of cutting edge technologies and most importantly, college students become empowered to become job creators rather than job seekers.

I do wish that all of you would give some serious thought to these issues and decide your respective course of action. It should be our collective effort to

progressively move towards making the world a better place to live. Through a lifelong learning process and maintaining our knowledge institutions, industry and society interconnected with each other, each one of us, regardless of career we decide to pursue, can meaningfully contribute to this objective. After all we are all here in this world to play our respective roles. Our happiness and joy of life depends on how well we play our roles.

To dear students, I would once again wish all of you well in your further pursuits. I am certain you would rise progressively in your respective careers. I do hope that as you rise, you will retain in you a spirit of trusteeship and contribute substantially to your roots, the society around, the institutions that brought you up and the nation at large. It is this spirit of trusteeship and the desire to support others who were not as fortunate or as successful as us that makes this world a better place. We must remember that our happiness depends on the happiness all around us.

Once again my best wishes to you all.

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