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Keynote address by Prof Richard C. Levin, President, Yale University, USA

Building World Class Universities

Minister Sibal, Mr. Singhani, Mr. Mittal, Dr. Mitra, distinguished guests:

It is a great pleasure to be with you this morning, and an honor to have the opportunity to address this distinguished audience, filled as it is with a diverse and accomplished group of leaders from across India. I thank you for the opportunity.

Over the next two days, you will hear about many of the most pressing issues facing higher education in India, issues that are also challenging universities in the United States and across the globe: reforming regulation and accreditation; using technology; ensuring afford ability; and promoting public-private cooperation. All of these issues present opportunities to improve our universities and further the good work they do in society.

It is an honor to have with us today the Union Minister for Human Resource Development, Kapil Sibal. Only a week ago, Minister Sibal visited Yale, and I was pleased to learn about his ambitious vision for higher education in India. He has shown intrepid leadership in fashioning the Ministry's plans for new world-class universities, and for making the challenge of improving India's higher education system a national priority.

There is no doubt that India possesses a number of educational institutions that have made their mark, and will continue to make their mark, on the world stage. The Indian Institutes of Technology, the Indian Institute of Science, and the Indian Institutes of Management are among these. But the rise of this country to become one of world's economic powerhouses begs for expansion in India's higher education system. The need is a striking one. India is already the world's largest democracy. In two decades, it will be the most populated country in the planet, and by 2050, it is likely to become the second largest economy in the world.

We hear much about today's "knowledge economy," and for good reason: it is the innovation born at the world's great universities - and the leaders who are trained there - that will drive the economic growth and continued prosperity of India and the world's other leading economies in the coming decades.

With this in mind, Minister Sibal and the Indian government have rightly set the dual goals of increasing access to higher education and creating a group of new, worldclass universities. Today, only 12 percent of college-age Indian students pursue higher education. By contrast, in the United States, 63 percent of students go to college; among the 30 member countries of the Organisation for Economic Co-operation and Development, the average is 56 percent. Minister Sibal has articulated an ambitious target of 30 percent of Indian students pursuing higher education by 2020.

Increasing access will require the expansion of enrollment at existing institutions and the creation of many new ones at all levels. The new world-class universities will only contribute a small fraction of the required increase in enrollments throughout India, but they will play an especially prominent role in India's future development.

First, however, these universities must be built, and that is what I will speak about today: the challenge of building world-class universities.

A great research university is not built from the bricks and mortar of its campus, but of the students and scholars who inhabit it, and the discourse and ideas they share. A university exists not for the purpose of handing out diplomas to those who go through its doors, but to advance knowledge and to educate young people to become critical thinkers and society's leaders. Building a world-class university is far more than a construction project - it is building a community of knowledge, far more than it is building a campus. A world-class university avails its students not just of courses of study, but of an environment that facilitates learning and growth in all areas of human endeavor. The university is composed of many things: a distinguished and engaged faculty; broad library and museum collections; state-of-the-art laboratories and computing resources; and a wide range of extracurricular, cultural and athletic activities, to name just a few essential components.

At the most fundamental level, a world-class university contributes to the world in three ways: through research, through education, and through institutional citizenship.

First, by facilitating advancements in science, technology, and medicine, research universities help spur economic prosperity and the advancement in the health and quality of life in communities across the world.

Second, by educating students, great universities prepare the next generation of leaders, leaders who will be able to tackle new problems and new situations with maturity and flexibility and who see the world with curiosity and an open mind.

Third, by acting as models of institutional citizenship, world-class universities contribute to the betterment of society and instill in their students social responsibility and an appreciation of service to their communities.

Let me discuss each role of the university in turn.

Inspiring innovation

First and foremost, a world-class university must have a world-class faculty. This serves as the backbone of any institution. For a broad, comprehensive university to be considered world-class it must have a faculty that, through its research, is making significant contributions to the advancement of knowledge.

In our "knowledge economy," nations prosper by virtue of their capacity to innovate - to develop and introduce new products, processes, services, and even, new ways of thinking. The extent to which such innovation happens is a function of the continuing advance of science.

As the principal source of basic research, comprehensive universities playa fundamental and irreplaceable role in encouraging economic development and national competitiveness. This basic research is motivated by the quest for intellectual discovery, not some practical objective-but in the long run, it is the wellspring for all commercially oriented research and development.

That fact, that fundamental research occurs within the university - rather than in government laboratories, non-teaching research institutes, or private industry - is an essential element of allowing a university to realize its full potential. When researchers are isolated in research institutes, students - especially undergraduates are deprived of exposure to first-rate scientists, their methods, and their research. Absent the best scientists, the quality of teaching will suffer, and the curriculum is less likely to include the most novel thinking and innovative approaches.

World-class research requires substantial resources, and it is important to allocate these resources to produce maximum social benefit. This is one area where America has far outstripped the rest of the world, by allocating its public funding for research not by seniority and not by political give-and-take, but through the strict meritocracy of peer review. India would be well advised to adopt this model.

The research undertaken in universities must not stay in the academic buildings and laboratories where it is born. To drive national innovation, it must move from theory to practice, and the university plays a key role in this process as well. Engagement with industry is a central function of the modem research university, as commercializing faculty inventions benefits both the university and the broader society.

Training future leaders

Second, just as faculty members contribute, through their scholarship and research, to the intellectual vigor of their nation and the world, they also serve to shape the future leaders of their nation and, again, the world.

The phrase "the knowledge economy" that is so often spoken about would seem to suggest that universities impart to young people what is most obvious - that is, knowledge. But the best universities do not practice the mere transfer of knowledge from teacher to student. They focus not on the mastery of content, but on the development of their students' capacity for independent, critical thinking.

Universities exist to teach young people how to think, not what to think. The best American universities seek to educate undergraduates not to be experts in a particular field, but to be creative, flexible, and adaptive; to approach problems critically and to collaborate with others to solve them; and to be able to understand different cultures and adapt to new environments. Universities like Yale train undergraduates not for a profession, but for life.

The method of education employed by America's most selective universities what we know as the "liberal education" of undergraduates - is particularly well suited to preparing students to enter the rapidly-changing modem world. Courses are not principally about a student mastering a body of knowledge, but about that student's mind being stretched. This must be a guiding light in the creation of a course of study: as many classes as possible should be small, small enough to take shape as active discussions, not as lectures passively attended. Students must be challenged not to memorize, but to analyze. Professors must serve as mentors, as sources of inspiration, not merely as lecturers and graders.

Students, too, should not find their development limited to the classroom. Students at Yale often say that they learn more over meals with their peers in university dining halls than they do in classrooms and lecture halls. In addition, extracurricular activities·- producing a play, singing in an a cappella group, writing for a campus publication - help teach skills in teamwork, communication, and collaboration that students later put to use as their careers develop.

Bettering society

Third, a world-class university leads by example, both in its local community and in the-world. Acts of institutional citizenship have benefits on two levels: they represent a positive force for human welfare, and they also inspire students to embrace social responsibility in their own lives. To illustrate this point, I will give examples of institutional citizenship both locally and globally.

When I became Yale's president in 1993, the city of New Haven had a distinctly negative external image. As soon as I took office, we created a comprehensive strategy to engage with our surrounding community, partnering with public officials and neighborhood groups to better the city in which we live. Our initiatives included an internship program to allow students to work in schools, community service

organizations, and local government; a Homebuyer Program to subsidize home purchases by our faculty and staff in neighborhoods around the campus; a concerted effort to spin-off Yale research into commercial ventures, particularly in biotechnology and medicine, and a major investment in the redevelopment of the downtown retail district. As a result of these actions, our community has been dramatically strengthened.

On a more global scale, consider the issue of reducing carbon emissions. The problem of global warming requires a multinational solution, and no solution will succeed without the cooperation of the United States and India. But universities can and should - play an important role in the effort to curtail global warming, both in their research and in setting standards for their own carbon emissions. In 2005, Yale made a commitment to reduce carbon emissions to 10 percent below our 1990 level by the year 2020, which equates to a 43 percent reduction in our 2005 carbon footprint. If the nations of the world were to negotiate such a reduction in carbon emissions later this year at their meeting in Copenhagen, the planet would be much better off.

Of course, we acknowledge that even the most ambitious sustainability efforts at the world's universities will not have a measurable impact on global carbon emissions. But in keeping with our mission as a teaching institution, we seek to inspire our students and lead by example. And I believe that the collective leadership of the world's universities on this important issue may very well serve, over time, to make meaningful global cooperation more likely.

Conclusion

There is no doubt that expanding access to higher education in India is an imperative, and Minister Sibal and others should be commended for understanding its importance. Expanding access to higher education will raise the general standard of living and create avenues of upward mobility for the most disadvantaged. With adequate investment of resources, expanding access is an achievable objective; it has been done before, in Europe and Japan following the second World War, and in China within the last eleven years.

But building world-class universities is a Herculean task. It has never been done before in one concerted effort, by one country. And it requires more than money. But if India succeeds, the impact on Indian society and its aspirations to world leadership will be limitless. It is through world-class universities that the seeds of innovation are planted arid the next generation of leaders acquires the capacity to lead. As this dream is pursued, it will be important to ensure that even these elite universities are accessible and affordable, and not merely available to those whose families can pay for it.

The challenge is immense, but the potential gains are commensurate with the challenge. Through their research, teaching, and institutional citizenship, a new set of great universities will strengthen this society, and the people of India - and of the rest of the world - will reap the benefits.