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**1st Asian University Presidents Forum, Guangzhou**  
**12-14 November 2010**

**Opportunities and Challenges Facing Asian Higher Education**

In 1943, Winston Churchill said “the empires of the future are the empires of the mind”. This prescient quotation is even more relevant today, where the success of societies and economies is increasingly dependent on the creation and innovative application of knowledge. For knowledge-based societies to develop and thrive, the presence of world-class universities is a critical requirement.

In this respect, I believe that Asian universities are at the most exciting phase of their development, and that the future for Asian universities is very bright. This presentation highlights the key reasons for this assertion.

Today, the world’s top universities are found mainly in the United States and Europe. In the future, however, this is likely to change, driven by 3 key factors.

First, Asian countries are investing very heavily in higher education

For example, China spent 1.5 % of its GDP on higher education in 2006, nearly three times higher than the corresponding figure in 1996. It is expected that the enrolment rate in Chinese universities will rise from 24 to 40 percent of senior high school graduates by 2020.

In India, the government spends 1.9% of its GDP on higher education, and plans to build 14 new world-class universities. India aims to increase the gross enrolment ratio in postsecondary education from 12 to 30 percent by 2020.

In contrast, many universities in the United States, Britain and Europe are facing significant budget cuts as a consequence of the global financial crisis in 2008.

Asian countries are not just investing more but they are investing strategically in higher education. Substantial resources are being allocated to build peaks of excellence and world-class universities, particularly in China and South Korea.

In China's latest "Outline of China's National Plan for Medium and Long-Term Education Reform and Development (2010-2020)", the strong emphasis on projects 985 and 211 will remain, to further boost the development of a group of leading universities. China's Medium- and Long-Term Talent Development Plan (2010-2020) also aims to attract the cream of the Chinese scientific diaspora back to the country by offering resources to established Chinese scientists from the United States or Europe to return to China under a scheme known as the *Qianren Jihua*.

The World Class University project is a higher education subsidy programme of the South Korean government, to invite international scholars with advanced research capacities to collaborate with Korean faculty members and establish new academic programmes in key growth-generating fields. This programme follows the Brain Korea 21 project and aims to transform South Korean universities into world-class research institutions.

Second, Asian universities are becoming very research-intensive

This is largely a function of the substantial increases in national expenditure on research in several Asian countries including China, Korea and Singapore. For example, Zhejiang University's President, Professor Yang Wei, had previously shared data on how the top C9 universities in China are ranked in research funding, and how they compare to the American Association of Universities. The results show that the research budgets of the C9 Chinese universities have grown dramatically. They average US\$160 million, compared with the corresponding figure for the American Association of Universities at US\$527 million. Additional data from Professor Yang Wei also indicated that citations from Chinese C9 universities are rising rapidly, moving closer to the total citation figures from AAU, although there is still a significant gap.

Third, Asia is rising rapidly in economic and global importance.

The remarkable growth of China's economy has catapulted the country to be ranked as the world's second largest economy in 2010, with its GDP constituting 13% of the world's total in terms of purchasing power parity. India is the fourth largest economy in 2010, taking up 6% of the world's GDP.

Despite these very positive factors and against the optimistic backdrop of Asia's continuing strong economic growth, Asian universities nevertheless face several challenges in their development into world-class institutions.

### Challenge #1:

Asian universities need to make a big shift from highly specialised education models to more broad-based ones.

Presently, many Asian universities still use education models with a high degree of specialised education. It is critical, however, for education to become much more broad-based and multi-disciplinary. This is because most of the graduates of the future will need to be prepared for a “lifetime of careers”, and not a “career for life”. Data from the US Department of Labour indicated that an average person with a US college degree had 10 jobs between the ages of 18 to 42, with two-thirds of the jobs held before 27. These jobs may be in completely different sectors. The graduates of the future must also be able to deal with complex issues that cross many domains of knowledge. To equip graduates to be able to take on many jobs in different industry sectors, and to deal effectively with complexity, universities must adopt more broad-based education models.

### Challenge #2:

Universities need to develop strong global education programmes.

The internationalisation of Asian universities is critical because an increasing proportion of graduates would need to work and live with people from different cultures and parts of the world. Hence, a core skill for the graduate of the future is the ability to be effective in diverse cross-cultural settings. It is critical, therefore, that universities provide many appropriate opportunities for students to develop and acquire these qualities through global education programmes.

### Challenge #3:

Asian universities need to develop research peaks which are among the leaders in the world.

Although Asian universities are making tremendous strides in terms of the volume and quality of their research output, they generally still lag behind the best universities in the West. To become truly world-class, Asian universities must develop research peaks which are among the leaders in the world, and also create distinctive new pathways to innovation, application and commercialisation.

A central issue is how Asian universities can seize these new opportunities to excel?

Attracting, nurturing and retaining top talent is the most vital strategy. Conditions are right for Asian universities to attract top faculty from the rest of the world because of the growth of the higher education sector in Asia and the vast resources being invested in this sector at a time where funding for faculty and resources in the rest of the world is declining.

But attracting talent is not sufficient in itself. It is also critical to nurture home-grown talent and to create a conducive environment for both foreign and local talent to excel, create an impact and to find academic fulfilment, which are also key steps towards retaining them.

To excel, Asian universities can also establish strategic partnerships to leapfrog ahead. Drawing from the experience of the National University of Singapore, we have several strategic and mutually beneficial partnerships which have boosted NUS' growth trajectory. One example is the NUS Yong Siew Toh Conservatory of Music. The partnership with the Peabody Institute of Johns Hopkins University has enabled the Conservatory to build a high international reputation within 6 years of its establishment, a much shorter timeframe than if NUS had attempted to develop it from scratch.

In a similar way, the Duke-NUS Graduate Medical School provides highly innovative education which is based on Duke's unique curriculum, but with innovations introduced in Singapore. Graduates from the Duke-NUS Graduate Medical School will receive a joint degree from both Duke University and NUS. This partnership has enabled the School to attract extremely bright students from around the world and to develop a top-rate graduate medical education programme, again in a short space of time.

NUS and Yale University are in advanced discussions to set up a Yale-NUS College in NUS, which aspires to create a new model of liberal arts education which builds on the best elements of current liberal arts education while incorporating the major thinking, culture and contexts of Asia. The proposed Yale-NUS College will provide a form of education that is new to Asia, which we believe is of critical importance for higher education in Asia, and for nurturing leaders of the future from Asia.

In conclusion, Asian universities are poised at the most exciting phase of their development, and the future is indeed very bright for Asian universities. Despite very significant challenges, there are also many opportunities for Asian universities to leapfrog ahead to join the distinguished league of the world's leading universities.