

**Emerging Directions in Global Education  
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**Title: Shaping universities that help shape global education**

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Excellencies, Distinguished Guests, Ladies & Gentlemen.

Thank you for the giving me the honour of addressing this distinguished meeting.

I bring you **warm greetings** and best wishes from the National University of Singapore.

I was asked to talk about how universities should transform themselves in order to cope with the challenges, and to capitalize upon the opportunities presented by the rapidly changing and competitive landscape.

In view of the theme of this conference, I would focus largely on the issue of global education. However, my comments would venture somewhat beyond education as I believe that universities that aspire to stand out globally, should not merely be responding to the changes around them, but must seek to positively shape the future.

**The world has changed fundamentally**, particularly over the past 15 years or so. It continues to change with great rapidity.

**The major driver is globalization** which has led to the close integration of national economies, a fact that has become very painfully obvious during the current financial

and economic crisis. Never before has the world been more interconnected. As a consequence, people today are pushed much more closely together, both in real and virtual space. Our graduates are highly likely to be working and interacting with people of many nationalities, from different cultures and backgrounds.

We are now also entering the era of knowledge societies and economies. This reflects the rising importance of knowledge & innovation as a key driver of economic growth and societal development. Interestingly, Sir Winston Churchill foresaw this when he said, **“The empires of the future are the empires of the mind”**.

The critical question for us is this:

**How should universities respond to this rapidly changing landscape?**

Taking a more positive stance, we can frame the question in another way, that is:

**How can universities help shape the evolving landscape, and indeed, help shape the future?**

I believe that universities can help shape the future in 3 ways:

- Provide transformative global education.
- Create positive impact through high quality research and its application, and through thought-leadership.
- And by becoming more global institutions.

Let me focus on Transformative Global Education.

I would like to characterize this in terms of 3 critical shifts that we need to make in how we think about higher education in a globalised world.

**First, we have to shift from preparing our graduates for “a career-for-life” TO preparing them for “a lifetime of careers”.**

In the past, the average graduate could do perhaps 3-4 jobs in the lifetime of their careers. Today, the average graduate would expect to change jobs several times often in completely different sectors. Furthermore, our graduates often don't start off in jobs

directly related to their degrees. At NUS, for eg, we found that this was the case for nearly two thirds of our recent graduates.

The implications for education are profound.

It means that we have to shift from narrow, specialized training for a particular industry to broad-based education. That is rigor and depth in a field, but with sufficient exposure to a range of other disciplines. Critical thinking skills are even more important in this situation. Students also must 'learn how to learn' so that they can continue learning throughout their careers and be able to periodically 're-tool' or 're-skill' along the way.

**Second, we have to balance “training of the mind” with “developing the whole individual”.**

We live in a world of rapid and often, difficult, change. Much of this change is driven by spectacular advances in technology. Our graduates need to be resilient to rapid change, AND also have a “can-do” attitude to seize new opportunities. They need good “people-skills” in order to succeed.

These qualities can't be learnt in the classroom.

They have to be acquired by experience.

In other words, universities have to carefully consider the right balance between “learning in the classroom” with “learning outside the classroom”.

We must create many co-curricular opportunities for our students to go out of their comfort zone, to test themselves, to fail and to pick themselves up again.

**Third, we have to shift from educating students for “local” settings TO educating them for global settings**

We live in a much more interconnected world. We come into frequent contact with diverse cultures and social perspectives, with people from many different parts of the world. Our Graduates need to appreciate different cultural perspectives and be able to operate effectively in different cultural and social settings

To do so, they must respect and value diversity. To be constructive members and leaders of society, values, ethics and responsibility are important attributes nurtured in the university setting.

How do these 3 critical shifts impact and inform the development of educational programmes in our institutions? I would like to illustrate this using the example of NUS, since this is the institution which I know best.

At NUS, our goal is to prepare graduates who are effective in a globalised world. Essentially, we try 'To bring the world to our students and to bring our students to the world'.

Our undergraduate programmes are broad-based, multi-disciplinary and flexible. We also offer a wide range of options of increasing complexity and rigor. These include double-major programmes, double-degree programmes and our liberal arts University Scholars Programme.

We have created a very diverse campus environment – 20% of the undergraduates and 60% of our graduate students are from overseas, coming from more than 90 countries. More than half of our faculty come from overseas.

We have a very wide range of co-curricular activities, many organized and run by students only – these provide opportunities for students to challenge themselves.

We have several innovative global education programmes and I would like to say a bit more about these.

About 50% of our undergraduates will have some overseas educational exposure. 20% spend a semester or more overseas.

We have about 40 joint- and double-degree programmes with partner universities overseas. Some are located in NUS in Singapore such as the Duke-NUS Graduate Medical School. Others are with partner universities overseas. This figure shows the number of programmes. As you can see, the number of students who have graduated so far is small, at 168. However, this number will go up as many of the programmes are new.

Of our global education programmes, I would particularly like to highlight one.

We have 5 **NUS Overseas Colleges** located in some of the most entrepreneurial parts of the world – in Silicon Valley, Biovalley, Shanghai, Stockholm and Bangalore. NUS' partnership with the Indian Institute of Science (IISc) in Bangalore, creates new opportunities for NUS students to study and work in the "IT Capital of India" for up to a year. This is the first NUS Overseas College to accept graduate students.

These Colleges provide experiential entrepreneurship education with our students spending one year as an intern in a technology start-up while taking courses in our partner universities. This programme has been very successful and many of our NOC students have told us that the experience has been "life-transforming".

**Universities can also become more global institutions**, to the benefit of their educational, research and overall impact.

One major model is what I would term "mutually beneficial academic outsourcing" at a global level. This is one useful way to create educational programmes which are unique and of exceptional quality built around complementary academic strengths in 2 universities. In other words, if University A is very strong in a particular area and University B has great strengths in a complementary area – if the 2 universities work together to put up a joint programme, this will be of exceptional quality. I like to refer to this as "mutually beneficial academic outsourcing".

**Let me illustrate with the example of the NUS-Karolinska Institutet joint PhD in genetic and molecular epidemiology.**

- a. This started several years ago when NUS faculty started working with faculty in Karolinska Institutet to compare the risk of breast cancer between cohorts of Swedish and Singaporean women.
- b. It turns out that Singaporean women born in 1963 have 3.5 times higher risk of developing breast cancer compared with Singaporean women born in 1928. This was not seen in Swedish women. The researchers also found that the biology of breast cancer in Singapore had important differences compared with that in Sweden.
- c. This sparked off a series of joint research projects to find the reasons for these differences. After a couple of years, the faculty felt that it would be very useful to develop a joint PhD programme. The Joint PhD students would help bridge the research in Singapore and Sweden, studying local databases and tissues at the 2 sites.
- d. The presence of the joint PhD students also allowed the research to be extended into studies on imaging and genetics.
- e. The structure of the joint PhD programme is quite simple. There are 3 blocks of coursework. The first 6-week block is in NUS, the second 6-week block in Karolinska and the final 6-week block back in NUS. In addition, the students spend at least 6 months doing research in the partner university.
- f. This joint PhD programme has had 3 intakes so far – 18 students from Singapore and 22 from Karolinska.

**So what is the added academic value proposition of this joint PhD programme?**

Firstly, the joint PhD students have greatly facilitated the joint research projects and allowed new collaborations to be developed.

The students get to work on a unique set of data and materials from 2 different countries. They have a first-hand understanding of ethnic differences in cancer susceptibility and are able to explore some of the underlying genetic and environmental reasons for this.

The students also have an excellent cross-cultural experience, and benefit from tailored coursework taught by some of the best Professors in 2 universities.

**BEYOND global education, universities can help shape the future through the impact of their research & its application and through thought-leadership.**

Every university will have many such initiatives – here is an example from NUS which is our Finance Research Cluster. It carries out cutting edge basic research as well as applied research and training for the finance industry in Singapore and beyond. It endeavours to provide thought-leadership for eg through lay articles on the financial crisis and through scholarly work on what the post-crisis financial system may look like.

If we believe that universities can help shape the future through transformative global education and research, **a key question is HOW they could do so?**

**I believe 3 things are critical:**

Autonomy to set directions and to be nimble. Of particular importance are competitive, flexible and performance-based human resource practices.

A singular focus on quality and excellence.

And a strong global outlook.

If we look at NUS as one example, over the course of the last 15 years, we have made 3 major transitions – from a teaching to a research-intensive to a global university. Organisationally, we were originally part of the civil service, then a statutory board with substantial autonomy, and since 2006, we have become a not-for-profit company with a very high degree of autonomy.

As a company, the NUS Board and management sets its own directions and goals, and has the budgetary and academic control to pursue these. Very importantly, we have flexible and competitive HR practices which are performance based. As a balance for the high degree of autonomy, NUS is also subject to a robust accountability framework.

We endeavour to keep a singular focus on quality and excellence. Our appointment, promotion and tenure system is similar to that used in major US universities. Compensation for our staff is internationally benchmarked and performance-based. All our programmes are referenced internationally in terms of quality assurance.

NUS maintains a strong global outlook – in terms of global education, research and leadership activities at an international level.

## **CONCLUSION:**

Globalisation and the rise of knowledge societies have fundamentally changed the higher education landscape. Universities have an important and vital role to play in shaping the future by:

- Providing a transformative global education;
- Becoming more global institutions; and
- Through high impact research and applications as well as by providing thought-leadership.

3 critical shifts have to be taken into account:

- The days of a career-for-life no longer apply. We have to prepare our graduates for a lifetime-of-careers;
- We have to develop the whole person and not only the mind; and
- The education that we provide must go beyond the local context to prepare our graduates for a globalised world.

The NUS experience has shown that autonomy to set one's own directions allows an institution to be responsive to the many rapid changes happening in the higher education landscape. A competitive and flexible human resource framework that is performance-based is also critical to attract the required talent. There must clearly be a singular focus on quality and excellence. Last but not least, it is important to embrace a global outlook.

Thank you.