

Globalization, Knowledge and Competition in Higher Education

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Konichi wa! I am deeply honoured to address you as part of the program. Today I want to present the ‘big picture’ of higher education and globalization. It is a fascinating topic and one that is becoming more important with each year, for higher education institutions in every nation – though the global dimension of action is more important for research universities than for other institutions, because of their special role in the production, storage and transmission of knowledge. It is mostly research universities I will discuss today. Knowledge is the most global aspect of higher education. In science there is a single main system of knowledge for everywhere in the world, though there is much more variation in the arts and humanities, and the social sciences, where the different languages and national traditions are at play.

LECTURE CONTENTS

I will begin by providing a working definition of ‘the global’ and ‘globalization’, and discuss the factors that are driving the processes of global convergence in knowledge and higher education around the world. Then I will note the important point that while on one hand higher education is becoming more global in its orientation and character, and must meet the challenge of global mobility of personnel and global ranking of institutions; on the other hand it continues to be shaped by national governments with its national mission in mind, and its institutions continue to maintain a local mission that serves their cities and the regions close at hand. Then I will discuss global competition and cooperation in the domain and knowledge, looking at the position of Japan’s institutions within the larger global setting; and also touch on the global competition for mobile students and staff, particularly the fee-paying student market in some countries. Next, the lecture will touch on the manner in which national systems and individual institutions are not just responding to global pressures and forces, but are themselves helping to create the global dimension

of action through the strategies they employ. Finally, I will provide two main points in conclusion.

What is the ‘global dimension’?

So what do I mean by ‘the global dimension of action’ in higher education?

The global dimension is...

The term ‘global’ refers to the whole planet or worldwide level of action. It refers to all those elements, systems, agents and institutions that help to constitute our world as a single entity, such as the ‘global ecology’, or ‘global climate’, or ‘interlinked global financial system’. The research and science system is one such global system. The Internet is another global system, very important in its shaping influence in research and higher education. An e-university that recruits students from all over the world is a ‘global university’. It is important to emphasize two aspects of the global dimension of higher education. First, the term ‘global’ does not contain everything. The term refers only to the one-world aspects of higher education. Higher education is now global but it also continues to be national and local at the same time. Higher education people are also affected by other kinds of association and action, such as the ties of professions, and cultures. Second, although the planet Earth is one world, whatever happens in higher education, knowledge and education are only global because human beings have chosen to make it so. Globalization in this sector is not inevitable. It is the outcome of human imaginations and actions and can take many different possible forms. I will come back to this later in the lecture when I talk about university strategies in the global setting.

Globalization

The term ‘globalization’ simply means becoming global, or becoming more global. Becoming more interconnected. Convergence between nations and institutions, across borders. The creation of global systems such as the Internet and the science system.

What is driving global convergence?

Some of the elements that are driving globalization in our time have been discussed. These include communications and the Internet. Global networking and dissemination in knowledge and research. Here the pace of change has been astounding, driven partly by the roll-out of the Internet. Knowledge in the open access open source form seems to be growing even faster than commercial intellectual property, powered by instantaneous communications. The part-integration of world financial markets and the mobility of production and labour across national borders. People mobility. The cheapening of air travel has been a

major factor. In higher education this includes the movement of both academic staff and students. Three million students now cross borders for education every year. Then there is the growing parallels and partial convergences between nations in their approach to financing and organizing education, though important national differences remain. For example many nations have implemented the corporatization of public universities. Finally, there is the global role of English language, which has been powered by its role in both business and science.

The common global trend is growth in services employment

Increasingly, national economies move in parallel with each other. And everywhere, employment is declining in manufacturing and agriculture and growing in private and public sector services. The services sector – for example, banking, retail, marketing and promotion, media and entertainments, public administration, health, education and so on - requires higher education from many or most of its employees. This is a key factor driving the expansion of higher education enrolments throughout the world.

Higher education institutions must operate in three dimensions at the same time

I have already mentioned that higher education operates in the global, national and local dimensions of action at the same time. These are distinct zones or spheres of activity. They are distinct but affect each other. They overlap in certain ways. For example a good performance in global ranking lifts the local standing of a university and impresses national government. National laws and regulations affect the global operations of research universities.

Investment in higher education

One of the most important overlaps between national, global and local is in the funding of institutions. The main sources of funding are national, from government, and local, from students and to some extent from business. The stronger the national and local base of support, the better equipped are universities to succeed globally. By far the greatest national investor in higher education is the United States. It spends seven times as much on higher education each year as the number two country, Japan. Note I do not have figures for China here, it is likely that China now spends almost as much as Japan on higher education and research. The incredible resources of American higher education help to explain its world leadership.

Volume of research papers

Let's look more closely at competition and also cooperation in research. It's important to recognize that both are involved. You might say the global knowledge system is based on 'comperation', or 'co-opetition', merged words that combine the two, competition and cooperation. Research and knowledge production are inherently collaborative processes in which open sharing is crucial. The level of international collaboration in research is growing as fast as is published research itself. Collaboration is greatly facilitated by synchronous communication and complex data transfer in real time. This has been available for less than two decades. It has changed the knowledge system fundamentally. At the same time, nations still compete with each other in research, driving growing investments in research capacity in some but not all countries. Analysts talk about an 'arms race in innovation'. In the area of research outputs shown in the slide, the United States produces nearly four times as many papers in science and technology each year as does the next nation, Japan.

'HiCi' researchers in the USA and the Asia-Pacific nations

'HiCi' researchers are high citation researchers – leading researchers in their fields. These researchers are overwhelmingly concentrated in the USA, which has more than 4000. The number two nation, the UK, has only about 400, Japan has 258. The USA attracts many outstanding researchers early in their careers, as PhD students and post-docs. It also draws mature researchers from abroad because it offers superior salaries and infrastructure.

World top 100 research universities

Because it is the largest investor in higher education, its system is second largest in student numbers after China, and it has the bulk of the world's leading researchers, it is not surprising that the US also provides more than half of the top 100 research universities on measured research performance, according to the annual Shanghai Jiao Tong ranking. The United States has 17 of the top 20 universities, led by Harvard. The other three in the top 20 are Cambridge and oxford in the UK, and Todai, the University of Tokyo. The UK has 11 of the top 100 research universities, followed by Japan and Germany each with six.

Top 100 research universities in the disciplines, Jiao Tong ranking, 2008

This table is a little hard to read, but you can look at it later perhaps. It looks at the strength of each nation in research in the broad discipline areas, engineering, physical sciences, life sciences, medicine and social sciences. The dominance of the United States in all areas is confirmed but the table tells us more about the other nations. It shows that Japan's greatest strength is in engineering and the physical sciences, not so much in engineering and life sciences. China is also strong in engineering, as is South Korea and Singapore.

The spreading of research capacity

In recent years China, Taiwan, Singapore and Korea have invested heavily in higher education and research. The growth of research in China has been astounding and China is already number two investor in R&D in the world. In the next generation these nations will shoot up the global tables. Along with Japan they will turn East Asia into the world's third great zone of research and innovation, alongside North America, and Western Europe. In future the USA will be less overwhelmingly dominant in research though it will remain the global leader for the foreseeable future. Much will depend on the extent to which the East Asian nations can build a cooperative approach to research in the manner that the nations of Western Europe are doing.

Shares of world's foreign students

Let's turn now to the worldwide movement of foreign students. Some of this student movement is sustained by student exchange and foreign aid, and some of the student movement takes the form of an economic market in international education mostly in the English speaking countries, whereby some nations generate export revenues from providing education to foreigners. Again, global student movement is a mix of cooperation and competition, with the element of competition playing a larger role than it does in the production of knowledge. Even in research, there is pronounced global competition for high calibre doctoral students. Approximately half of the world's doctoral students go to the United States, which provides the most attractive scholarships. The slide includes all student movement for at least six months. The English language countries have an advantage here because students want global English. Next are France and Germany, followed by China (a fast growing exporter) and Japan which draws 4 per cent of all international students. If it is achieved, the policy target of 300,000 international students per year would double Japan's share.

Export revenues, English-speaking education export countries

The United States, the UK and Australia made good money from global student movement. These are 2005 figures. The total size of this market is now estimated at \$40-50 billion dollars US each year. In the last decade the number of international students has grown at 6 per cent per annum while total enrolments in tertiary education have grown at 3 per cent per annum. Global student movement has continued to increase during the recession. It seems to be 'recession proof'.

English is the only global language now, though others may emerge

I have noted that language is a key factor in both the flows of knowledge and the flows of students. The English language countries enjoy a special global

advantage due to the primacy of the USA and UK in the last two hundred years. It may be that in the longer run Chinese national language will become a second global language. Spanish is a possible candidate also. Other language groups such as French and Japanese will remain strong at national level.

Implications for the global strategies of institutions

In the final part of the lecture I will briefly discuss the implications of globalization for the strategies used by nations and institutions in developing education and research activities and advancing their interests on the world stage. Many novel strategies have emerged quickly in the last decade.

Global strategies

Some of these strategies are driven largely by governments (first column). I have mentioned national investments designed to build research capacity and performance. Singapore has created an elaborate and far-sighted strategy, the 'global schoolhouse' strategy, designed to position the island state as a world leader in education and innovation. It has invited American, European and one Japanese university (Waseda) to establish campuses, and funds collaborative research projects with global giants such as MIT. The National University of Singapore is perhaps the most dynamic university in Asia in the growth of its research, and the breadth of its student exchange and research partnerships. National governments have also negotiated freer trade relations in education, though genuine liberalization has been largely confined to e-learning. Core national school and university systems are protected from foreign competition. A second group of global strategies, in the second column, are driven primarily by institutions themselves. These include partnerships in student exchange, joint degrees, e-learning and research; networks or 'consortia' which are partnerships between larger groups of like-minded institutions; the creation of campuses in foreign countries, an area where the UK, Australia and the USA are most active, especially in nations such as China and Malaysia that are using foreign education to supplement home provision; and e-universities. However, the major e-university ventures created at the end of the 1990s all failed and the full potential of e-learning on the global scale has yet to emerge. A third group of global strategies, in the third column, involve action by both governments and institutions. These include the export of education services to international students in order to generate income; the fashioning of some cities as 'knowledge precincts' designed to attract foreign students and talented researchers, often with the intention of recruiting skilled migrants to the country; and the evolution of cooperation between groups of nations, 'regionalization' as it is called, where the main example so far is that of Europe. In Europe nations have adopted a common system of degrees and facilitated recognition of each

other's degrees and institutions for mobility purposes. They have also established a European Research Area with a common system of research grants. This has greatly encouraged research cooperation across national borders. The final column refers to the growing role of rankings and other global comparisons between nations and institutions in higher education. University rankings have a marked influence on where the best students and academic staff go, and influence levels of funding and research activity in many countries.

Strategies that are creating the global in higher education

You can see that the spatial implications of these global strategies are varied. Some can be conducted solely from home. Some involve networks between different 'homes'. Some involve persons or institutions in crossing borders. Some involve re-imagining and re-making the whole global higher education space. Together these strategies are shaping the global dimension of higher education for the future. Globalization is not just something 'done to' nations and universities, it is something they themselves are creating.

Conclusion 1: The global dimension of higher education is both competitive and cooperative

I have two main conclusions. The first is that in the global dimension, there is more to it than simply a competition between nations. Cooperation is probably the most important aspect. Along with the economy and communications higher education institutions are a key influence in shaping the world to come. They are helping to shape the global society of the future.

Conclusion 2: The double objective of institutions in the global setting

Second, in their global actions institutions find themselves having to meet two requirements. First, institutions strive to become World Class Universities, which means global research universities. Second, even while engaging in global activities and relationships, they must sustain and develop their own mission and identity. This includes their national and local selves and traditions.

Thank you for listening!