

The Changing Dynamics of PhDs and the Future of Higher Educational Development in Asia and the rest of the World

by: Zoltan Paul Jambor (Korea University – IFLS: Department of Education, Art & Design)
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Abstract:

Industries in developing countries could counterbalance the western monopoly on higher education by investing more in research at local universities and consequently improving the local human resources talent pools and the overall world rankings of the local universities. What is more, with the perceived lack of necessity for university faculty to possess PhDs, it should not go unnoticed by any applicant as it may well be that his/her citation/publication index holds the actual key to being employed. On the whole, all parties involved need to be increasingly conscious of the changing situation in order to maximize their productive potential in the modern environment of higher education.

Introduction

With the Citation Index Indicator of the QS World University Rankings accounting for 20% of the weighing and with the Citation Index and Citations per Faculty as well as the number of articles published in Nature and Science Indicators in the Shanghai Jiao Tong Rankings accounting for a total of 60% of the weighing used to rank universities worldwide (See Tables 1 & 2), it should be no wonder why universities tend to hire faculty with a high number of academic citations/publications instead of hiring them purely on the merits that they have acquired Doctorates. Although faculty with PHDs tend to have more manuscripts published than those without them, it is seemingly becoming increasingly less necessary to have a PhD to be considered for a faculty position at universities worldwide. After all, there is evidently very little weight given to the number of PhD holders at the universities by either the QS World or the Shanghai Jiao Tong rankings' methodologies.

In essence, the international university system could be faced with fundamental restructuring due to the visibly diminished role PhDs have for university faculty. That is to say, Master's Degrees are often sufficient for teaching positions that do not require research participation and even those with PhDs are placed into teaching only roles if they opt not or fail to publish their work in Academic Journals/Reviews. All in all, doctorates are on their way to becoming unnecessary for teaching only posts. What is more, it is increasingly more relevant for potential candidates for research only positions to have substantial research portfolios as opposed to having PhDs. After all, not all PhD holders take part in the necessary research in the relevant fields.

This apparent shift in the type of qualifications needed for university faculty is in effect expected to transfer the balance of power from graduate schools to those universities/organisations that run academic journals. This however is a dangerous path as it would further concentrate the powers/influences of the global academic network to a more centralized hub operated by a small pact of developed countries that are known to run a large portion of the highly acclaimed academic journals worldwide. What is more, since the universities/organizations that run highly acclaimed journals tend to be in more advanced countries, this would translate to an increased academic domination of the world by the 'West'.

The shift may have started as early as the 1970's when universities moved away from education only roles and took up progressively more research and development functions through the merger of industry and higher education in an effort to monopolize the knowledge capital in the western hemisphere (see Noble, 1998). On the whole, conducting research has become ever more important for universities, however, with the onset of the international ranking systems of universities it has become even more crucial for faculty to have their work and research published in academic journals, reviews and academic data banks in the relevant fields.

Moreover, since the methodology of the QS World is still seen to be evolving, like it has recently done in 2007, it may be imprudent for universities to place excessive amounts of weight on any ranking of this kind while making hiring and administrative decisions as it could easily be subject to change and make all their current efforts at improving their international standing in vain. After all, the QS World and Shanghai Jiao Tong rankings (also subject to unanticipated change) are already receiving a lot of attention by universities and so the move toward the centralization of the powers may have already been put into motion. That is to say, the well established coalitions between universities and industries in the 'west' have already led to a blueprint of the criteria by which universities are judged overall, thus, centralization has at least been given a distinct direction.

What is more, with South Korea in the lead in outsourcing its higher education to the United States and with China; India in pursuit (See Kwon, 2008), this kind of trend should become ever more disturbing for universities which are located in developing countries.

On the whole, academics and the administrations running the colleges and universities need to be increasingly aware of the changing dynamics of the system of higher education so as to be able to keep pace with the rate of development ahead of the competition. Moreover, Asian universities need to pay special attention to the situation at hand and start forming stronger research oriented alliances with local industries so as to enhance the amount of research carried out at the respective universities in an overall attempt to counterbalance western academic domination. This would undoubtedly go a long way in improving the pickings of local graduates and increasing the citation index indicators of the faculty at the respective universities.

The QS World and the Shanghai Jiao Tong Rankings

There are several world university rankings, but the Shanghai Jiao Tong University ranking (Shanghai, 2008) and the QS World (The Times Higher Education Supplement) ranking appear to be most prevalent of all the rankings of their kind. Proof of this may lie in the fact that universities around the world are often seen to be posting their own QS World and Shanghai Jiao Tong rankings on their websites. For instance, the following quote is found on the 'About City' page of the City University of Hong Kong website: "CityU ranks 45th in world for engineering publications - In addition to a ranking improvement in **The Times Higher Education Supplement** 2008 survey, CityU now ranks among the world's top 50 for its engineering scientific papers, according to a Taiwanese survey" (City U, 2009). Additionally, the 'About KU; History' page of Korea University (KU) has the following quote: "**Ranked 150th in The Times World University Rankings 2006, 10**" (KU, 2009). More to the point, the International; Overview page of the KU website still has the following quote: "Why Korea University? ... [Because it is] **one of the few private universities in Asia to be ranked among the top 200 universities by The Times Higher Education Supplement 2006**" (KU International, 2009). Furthermore, 'The Daily of the University of Washington' boasted about the 16th place UW received from the Shanghai Jiao Tong ranking. A segment of the news clip reads as: "At the last Board of Regents meeting, UW President Mark Emmert announced that the **UW had been ranked 16th in the Shanghai Jiao Tong Global 500 rankings**. It was ranked third in the areas of pharmacy, medicine and biomedical research".

Consequently, since the QS World and Shanghai Jiao Tong world university rankings appear to be the most prevalent measures by which universities are given status worldwide, it is no wonder why universities around the world are restructuring in a bid to place higher in the rankings.

For a better understanding of the need to restructure universities, it is essential that the methodologies of both the QS World and the Shanghai Jiao Tong university ranking systems are examined to at least some degree. Consider Tables 1 and 2 for instance:

Table 1: The Times Higher Education Methodology

Indicator	Explanation	Weighting
Academic Peer Review	Composite score drawn from peer review survey (which is divided into five subject areas). 6,354 responses in 2008.	40%
Employer Review	Score based on responses to employer survey. 2,339 responses in 2008.	10%
Faculty Student Ratio	Score based on student faculty ratio	20%
Citations per Faculty	Score based on research performance factored against the size of the research body	20%
International Faculty	Score based on proportion of international faculty	5%

(QS Times; Methodology, 2008)

Table 2: The Shanghai Jiao Tong 2008 World University Ranking Methodology

Criteria	Indicator	Code	Weight
Quality of Education	Alumni of an institution winning Nobel Prizes and Fields Medals	Alumni	10%
Quality of Faculty	Staff of an institution winning Nobel Prizes and Fields Medals	Award	20%
	Highly cited researchers in 21 broad subject categories	HiCi	20%
Research Output	Articles published in Nature and Science*	N&S	20%
	Articles indexed in Science Citation Index-expanded, and Social Science Citation Index	PUB	20%
Per Capita Performance	Per capita academic performance of an institution	PCP	10%
Total			100%

* For institutions specialized in humanities and social sciences such as London School of Economics, N&S is not considered, and the weight of N&S is relocated to other indicators.

(Shanghai; Methodology, 2008)

With 20% weight in the QS World and 60% weight in the Shanghai Jiao Tong methodologies given to the Citations and Academic Publications per Faculty indicators, it is evident that for a university to have a higher rank worldwide it is essential that its faculty, taken as a whole, have sufficient numbers of academic citations.

PhDs Becoming Redundant for Certain Faculty Positions

According to the methodologies of the QS World and Shanghai Jiao Tong rankings (Tables 1 & 2), there appears to be no indicator that stipulates that universities are ranked in any way on the ratio of PhD holders in their faculty and universities seem to acknowledge this phenomenon considering some of their posted faculty job ads. Take the job advertisements; Appendices 1 to 5 as examples, paying particular attention to the highlighted/bold sections. These advertisements present a clear indication that at least some universities no longer require all their faculty candidates to have PhDs before they are considered for the positions on offer. It is highly conceivable that this trend came about in part as a direct result of the QS World and Shanghai Jiao Tong methodologies.

The Australian Higher Education has already forecasted a change taking place, brought to light by a published article entitled '*Lecturers with PhDs 'overqualified'*' which contains the following unequivocally enlightening segment:

THE PhD - seen as a foundation for an academic career - is becoming redundant for many lecturers as they are increasingly sidelined into teaching-only roles. The claim is made in a research paper presented to the Society for Research into Higher Education annual conference this week, which links the increased selectivity of the research assessment exercise with a rise in the number of teaching-only contracts. It warns that the RAE [Research Assessment Exercise] has put pressure on academics to publish the "right sort of papers in the right sort of journals" or to risk being "consigned to the waste-land of the research-inactive". The paper by Stephen Court, senior research officer at the University and College Union, warns: "There is a danger that entrants into the profession will be over-qualified if staff with PhDs end up in a post that does not require research." He explains: "Academics may have started their careers conventionally, investing three or more years in a PhD, and if they find themselves in a teaching-only role that would be quite damaging." The paper highlights rapid growth in the number of teaching-only posts, up from 12,000 to 40,000 in a decade. They now account for a quarter of all academic staff positions. ... Mr [Stephen] Court adds: "It is a part of the academic culture of the past 50 or 100 years that teaching goes hand in hand with research, and to be removed from that position must be very painful." ... [RAE says:] "Often, if universities do not feel that an academic's research is up to RAE standard, those considered not research-active will be put on a teaching-only contract."

(Gill, 2007)

All things considered, the need for faculty to publish the "right sort of papers in the right sort of journals" (RAE in Gill, 2007) is evidently becoming more important than the need to have PhDs. That is, academics will be confined to teaching only positions if they fail to publish the relevant manuscripts in the "right sort of journals" (RAE in Gill, 2007) regardless of whether they have PhDs or not. Therefore, it

may very well be more valuable for any future faculty to have a repertoire of pertinent research publications as opposed to possessing PhDs.

The Perceived Danger in Giving Undue Weight to the QS World and Shanghai Jiao Tong Methodologies

One danger of giving too much weight to the QS World and Shanghai Jiao Tong rankings is that the apparent and sometimes undue focus on the citations/publications per faculty indicators in the methodologies of both rankings would in effect further contribute to the reallocation of powers from a more or less wide range of universities across the globe to those universities and organizations that run the most prominent academic journals. This is a genuine concern, given the high likelihood of the leading journals to be operated by a handful of universities in the developed world. This would in effect translate to increased academic domination of the world by the 'west'.

All things considered, giving more weight to the most prominent ranking methodologies when making administrative decisions is not without its own set of perils since any future change in the methodologies would result in an unexpected shift in the rankings for certain universities. Case and point; there was an unforeseen change in the QS World methodology in 2007. Specifically, since peers could no longer vote for their own universities, a number of universities found themselves dropping/improving in the rankings. Korea University with a large faculty for instance dropped 93 places within a year. For the most part, this would never have happened should the methodology not have changed to begin with.

One might argue that this change in the QS World methodology is only fair, considering that peers should not be allowed to vote for their own institutions as this would cause an unwarranted bias in the system, nevertheless, the apparent potential of any future change in the QS World methodology could have dramatic effects for a significant number of universities.

Overall, the evident inclination for universities to base hiring and administrative decisions on the most prominent ranking methodologies may make all their current efforts ineffective as far as attaining higher positions on either of the rankings. Nonetheless, with both the Shanghai Jiao Tong and the QS World placing such large weight on the Publications/Citations per Faculty indicators in their methodologies, it may very well prove essential to take the necessary chances to restructure their institutions in order to gain a higher overall rank.

The Centralized Western Hub of Higher Education

According to David Noble, universities are no longer run by themselves. That is to say, they are run by corporations and industries that have increasingly invested in the research conducted in universities. All in all, the already developed industrialized countries of the 1970's (primarily those in the west) have made conscious efforts to invest in higher education and the research carried out within. Noble states this point more clearly by stating that:

in the mid-1970s when, in the wake of the oil crisis and intensifying international competition, corporate and political leaders of the major industrialized countries of the world recognized that they were losing their monopoly over the world's heavy industries and that, in the future, their

supremacy would depend upon their monopoly over the knowledge which had become the lifeblood of the new so-called "knowledge-based" industries (space, electronics, computers, materials, telecommunications, and bioengineering). This focus upon "intellectual capital" turned their attention to the universities as its chief source, implicating the universities as never before in the economic machinery. In the view of capital, the universities had become too important to be left to the universities. ...The result of this first phase of university commoditization was a wholesale reallocation of universities resources toward their research function at the expense of their educational function.

(Noble, 1998)

The Solution May be up to Asian Universities

The already well established universities throughout the Asian economic powerhouses such as Japan, China, South Korea, Singapore, Hong Kong and Taiwan should consider forming stronger alliances to counterbalance the regional powers of the seemingly unshakable western coalitions between, for the large part, English speaking universities/ research facilities and their neighbouring industries. After all, one would be hard pressed to deny the existence of such a power-hub of 'western' universities given the current ranking of universities worldwide (Tables 3 & 4):

Table 3: 2008 QS World University Ranking

2008 Ranking	School Name	Country
1	Harvard University	United States
2	Yale University	United States
3	University of Cambridge	United Kingdom
4	University of Oxford	United Kingdom
5	California Institute of Technology	United States
6	Imperial College London	United Kingdom
7	UCL (University College London)	United Kingdom
8	University of Chicago	United States
9	Massachusetts Institute of Technology (MIT)	United States
10	Columbia University	United States
11	University of Pennsylvania	United States
12	Princeton University	United States
=13	Duke University	United States
=13	Johns Hopkins University	United States
15	Cornel university	United States
16	Australian University	Australia
17	Stanford University	United States
18	University of Michigan	United States
19	Tokyo University	Japan
20	McGill University	Canada

(QS World, 2008)

Table 4: Shanghai Jiao Tong University Ranking

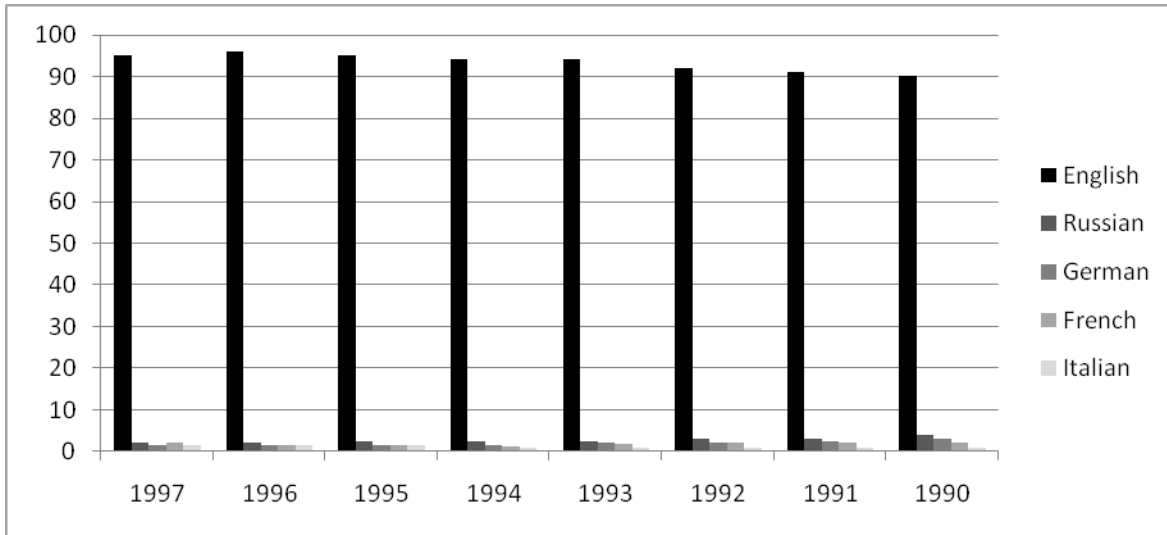
2008 Ranking	School Name	Country
1	Harvard University	United States
2	Stanford University	United States
3	University of California (Berkeley)	United States
4	University of Cambridge	United Kingdom
5	Massachusetts Institute of Technology (MIT)	United States
6	California Institute of Technology	United States
7	Columbia University	United States
8	Princeton University	United States
9	University of Chicago	United States
10	Oxford University	United Kingdom
11	Yale University	United States
12	Cornell University	United States
13	University of California (Los Angeles)	United States
14	University of California (San Diego)	United States
15	University of Pennsylvania	United States
16	University of Washington (Seattle)	United States
17	University of Wisconsin (Madison)	United States
18	University of California (San Francisco)	United States
19	Tokyo University	Japan
20	Johns Hopkins University	United States

(Shanghai, 2008)

In either of the two major rankings, only Tokyo University made it into the top 20 universities from among the non-English speaking countries around the world. Interestingly, both ranking systems place it at 19th place overall.

Is it realistically possible for the best 20 universities to come from a handful of ‘developed’ countries? Well, the rankings speak for themselves, however, some sort of a mechanism must be in play which allows mainly universities from English speaking countries to boast the highest international rankings. While David Noble would attribute it to the coalition between universities and developed industries, and I would be hard pressed to come up with evidence to state otherwise, there is yet another reason for this alarming trend. The culprit is none other than ‘English Language Imperialism’ (See Jambor, 2007). That is, since the vast majority of Academic publications are published in the new Lingua Franca: the English language (Figure 1), it is no wonder that only those universities that hire mainly faculty who are proficient in English reach the top 20 positions on a global scale. After all, English proficiency and Academic publications go hand in hand given that English language articles constitute for nearly 95% of all publications worldwide.

Figure 1: Academic Output – Scientific Citation Index in the Major Languages



(MWS, 1998)

All in all, unless universities situated in up-and-coming Asian economies devise counter measures to counterbalance the domination of higher education by the western hemisphere, they have no other choice but to give into English Language Imperialism.

Especially with the introduction of Online and Distance Education by universities worldwide, the well established powerhouse universities, mainly from the west, would be seen to generate even larger markets for themselves, taking away even more opportunities from universities situated in the rest of the world. After all, countries like South Korea, China and India are increasingly outsourcing the higher education of their youth to the west. Percentage-wise South Korea is in the lead (See Know, 2008), therefore, it should be in especially South Korea's interest to put measures in place to reverse this trend.

What is more, with the more prominent emergence of the distance/online education, otherwise known as "digital diploma mills" (Noble, 1998), administrators will be able to hire less qualified faculty, hence providing even less of a need for faculty to possess PhDs. Directly in line with this reasoning, Noble makes the following claim:

Once faculty put their course material online, moreover, the knowledge and course design skill embodied in that material is taken out of their possession, transferred to the machinery, and placed in the hands of the administration. **The administration is now in a position to hire less-skilled, and hence cheaper, workers to deliver the technologically prepackaged course.** ...Most importantly, once the faculty convert their courses to courseware, their services are, in the long run, no longer required. They become redundant, and when they leave, their work remains behind.

(Noble, 1998)

On the face of it all, it is becoming ever more likely that qualified PhD holders will not be in such high demand as they once were in the golden days of higher education. Even the world's most renowned universities may be on their way to become increasingly commercialized in this new era of 'technologization'. Therefore with the western hemisphere apparently leading the way to a ground-breaking era of modernized higher education, Asian universities and industries alike should take heed as they could very well be left behind if their deep traditions in making administrative decisions are not abandoned for the sake of keeping pace with the ever-changing western world.

Practical Solutions

It is true that a number of South Korean universities for instance have already enjoyed ample industrial investment, however, some of these 'profit oriented investments' come about as business venture projects which are rarely seen to be headed by faculty and does not fulfill the kind of research oriented purpose that would readily involve the students of the respective universities. This certainly appears to be the case with Hoseo University and other universities which are moving in the same general direction within South Korea. Furthermore, another type of investment is primarily aimed at helping universities with providing the cost of raising buildings used by the relevant departments. The Korea University Business School (KUBS - where current Korean President Lee Myung-bak graduated from) for instance is situated in a state of the art building named "LG-Posco" which was built using funds provided by LG and POSCO (Pohang Iron and Steel Company), as is proclaimed by the KUBS students I had the pleasure of teaching at Korea University. Nevertheless, the abovementioned investments are not intended to finance any research conducted by students or faculty, thus, it is unlikely that these types of investments will go the distance in improving the rankings or the overall academic quality of the universities in question.

As for the campus of Hoseo University where an industrial building then dubbed a 'research facility' (KDNS now known as SEMES; a subsidiary of Samsung) was built in 2004, for the large part, it was not actually the faculty and the students that do/did the research, but rather professionals hired by SEMES from outside of the university. Limited faculty and student participation ever takes place there. In essence, it is no more than a factory on the campus of Hoseo University. Thus, it seems that it is not so much the lack of investment made by industries but rather the type of investment they make that would go a longer way in improving the rankings and the general quality of the educational institutions themselves. What I would propose here is for Asian industries to be less self-interested and form genuine research oriented bonds with local universities instead, in order to improve their pickings of local graduates. It seems to me that this would be beneficial for all parties involved since it would ensure that higher education would not need to be outsourced to universities that have strong ties to the competitors of the very industries that are found to make imprudent investments in the local universities.

Sanyal, Bikas C. and Varghese, N. V. made the claim, in 2006, through their paper entitled 'Research Capacity of the Higher Education Sector in Developing Countries' (disclosed in Paris at the Second International Colloquium on Research and Higher Education Policy), that developing and marginalized countries, the likes of China, India [and South Korea] need to have more private investment in R&D and human resources development within the realm of their higher education sectors (Sanyal and Varghese, 2006). To explicate this point the following section of Sanyal and Varghese's paper is used as an exemplar:

Based on the available sources of information ... the knowledge divide is deep and is heavily tilted in favour of developed countries. Developing countries suffer from a lack of both financial and human resources in [Research and Development] R&D. They need to improve their capacity to produce knowledge domestically and absorb the knowledge produced elsewhere. ... While Universities play a less significant role in funding and carrying out research, their role remains unchallenged in the area of research training. ... There is a need for reviving and strengthening the university system in developing countries to strengthen their research capacities. This change should be reflected in resource allocation to higher education and research. ...The experience of developed countries shows that the private sector investment in R&D increases when the research environment and facilities improve in the country. Therefore **the initial investment to strengthen research capacity in developing countries have to come from public sources.** ... [Overall], the technological transformation leading to the creation of the knowledge society, unless closely monitored, carries the real danger of a growing digital divide between and within nations (World Bank, 2002).

(Sanyal and Varghese, 2006)

The government of the Republic of Korea has made the above mentioned 'public' investment through the *National Project Towards Building World Class Universities* (WCU, 2008-2012) by giving prospective universities a combined total of 165 billion Won (Kim, 2008), roughly 132 million US dollars (according to Aug 25, 2009 exchange rates), to invite foreign as well as Korean researchers/professors who can in part provide assistance in carrying out much needed research at local universities. Therefore, it seems that the South Korean government has managed to catch onto the general idea of how to improve the international standings of local universities but the industries themselves have largely failed to do so. Asian industries should follow the South Korean government's lead in this goal oriented matter. Perhaps, as stated by Sanyal and Varghese in the above segment, this initial public investment would indirectly lead to more private funding in human resources development and R&D investment by the public sector in South Korea.

All in all, there needs to be a conscious effort on behalf of Asian industries to form deeper research oriented coalitions with the local universities, before any initial public investment is ever made, so as to prevent the current trend wherein the higher education of Asian youth is increasingly outsourced especially to the USA where the most prominent universities and research facilities tend to be. After all, research leads to innovation as well as academic advancement and maturity. Overall, these traits go a long way in improving the standards of higher education, therefore, Asian industries and universities should take the existing coalitions in the west as blueprints for their success.

A Measure of Regional Success

Take for example the international space race as a measure of regional success: The Soviet Union launched Sputnik 1 on October 4, 1957 (Wikipedia: Sputnik 1, 2009), which was followed by NASA's (USA's) Explorer 1 on January 31, 1958 (SNASM, n.d.). France was a few years behind when on November, 1965 it launched its Diamant A satellite on top of a French made rocket, the Astérix (Diamant, 2008). Japan pursued when it launched its first satellite Oshumi on February 11, 1970 (Wikipedia: 1970 in Spaceflight). China was close behind with the launch of its own satellite Dōng Fāng Hóng I the same year on April 24 (Wikipedia: Dōng Fāng Hóng I). The United Kingdom was in pursuit when it put its Prospero X-3 satellite into orbit on October 28, 1971, using a Black Arrow rocket (Black Arrow, 2008). India launched its first satellite the Aryabhata on a Soviet rocket on April 19, 1975,

however, it did not successfully launch a satellite, the IRS-1D, into orbit using an Indian built Satellite Launch Vehicle rocket until 1997 (Aerospace India, 2008). Eventually, South Korea launched its first satellite on August 25, 2009 (SBS, 2009), however, the satellite fell out of its unintended orbit. On the whole, since Japan and China were 13 years behind in the satellite space race, India 40 years behind and South Korea's failed attempt almost 52 years behind the original Soviet satellite launch, it is without a doubt that this may be a true indication of the current trend for Asian countries being relatively slow to catch on in terms of research and development.

Notwithstanding the above mentioned facts, one might make the basic argument that it was in effect the Germans that developed rocket technology during World War II, and that the Americans and the Soviets merely took the concept one step further with the actual help of the very same German scientists that developed the concept in the first place. It is also proposed that it was the Chinese who first used rockets in 1232 (Wikipedia: Rocket, 2009), however, they were merely crudely made ancestors of today's technology.

All things considered, it was the actual efforts of Konstantin Tsiolkovsky, Robert Esnault-Pelterie, Robert Goddard and Hermann Oberth (Wikipedia: Rocket, 2009) that contributed significantly to laying down the foundations for the kind of rocket technology that could serve to reach space. Accordingly, whatever argument one is inclined to make, it is essentially the long years of R&D by a wide range of people that brought man and the first satellites closer to earth's orbit. Thus, it is in reality the groundbreaking research and any further developments carried out by the various individuals, countries and institutions that paved the way to the space age. Consequently, research is a necessity and it should therefore be an integral part of all post-secondary institutions if they are to stand a chance in contention for the most elite ranks on the world stage. For the most part, Asian universities are no exception to the rules of the higher education race.

Although Asian industries are truly good at reinventing ideas which are already devised and they are even more adapted to making significant improvements on them, they are for the most part hard pressed to come up with revolutionary new concepts on their own. Moreover, one must admit that Asian industries have made significant research improvements, however, the relative setbacks may very well be due to the comparably lack of research carried out in Asian post-secondary institutions. All things considered, if Asian industries and post-secondary institutions fought on a more united front they would have a much better chance of winning the technology race, coming out as winners in not only the realm of industry but also in that of higher education.

With Japan leading the Asian pack, as is evident even with its satellite launch before any other Asian nation was able to do the same, not to mention its other innovations of recent years, it is no wonder that Tokyo University ranks 19th in both the QS World and the Shanghai Jiao Tong rankings. Overall, South Korea, China, India as well as other Asian post-secondary institutions need to step up to the plate and conduct the necessary ground-breaking research. To reach this goal, they would be much better off with the assistance of the local industries. Therefore, local Asian industries need to invest in local university research. In essence, Asians must refrain from outsourcing their higher education to universities in the United States and the developed western world. All things considered, they must take their own academic and industrial fate back into their own hands. There is simply too much brain drain in Asia with a sizeable number of highly gifted individuals moving to the likes of the United States to do their post-secondary studies. In 1999 for instance 31.3% of South Korean who did their Doctorates in the U.S. did not return to South Korea (Kim, 2008).

Ageism, a Foreseeable Obstacle

Perhaps it would be necessary for Asian nations to put aside their ageist tendencies (not to be confused with 'respect for age'), whereby they place older and more established individuals in leadership positions. On the whole, it may be more advantageous if younger leaders with innovative potential were placed into leadership roles at both universities and private industries so as to bring those individuals with the highest levels of flexibility and resourceful vitality to the plate. This may ensure that the necessary changes are made without any major impediments, for older people tend to be more concerned with maintaining hegemony. After all,

there is evidence to suggest that older people have less energy, less incentive to succeed, and more investment in maintaining the status quo than younger, up-and-coming dynamos. That means that a society run exclusively by those at the top of the age ladder is likely to be more resistant to change, slower to generate new ideas, less flexible and less well equipped to survive in today's rapidly shifting commercial, political and social milieus.

(Timblick, 2008)

Essentially, Asia may need more than just to have its universities restructured and research oriented coalitions formed between the local industries and the local post-secondary institutions. Overall, it needs young mavericks who are able to bring about all the required changes. Placing people in positions of power simply based on the age factor is like taking all other significant measures out of the equation. What is more, being older does not necessarily make one a better leader, and not giving someone with the right qualities a chance at leadership due to their younger age may prove to be a major handicap that Asian industries as well as post-secondary institutions may be better off without.

Conclusion

On the whole, while universities may be ever more inclined to take the Citations/Publications per Faculty Indicators of the QS World and Shanghai Jiao Tong ranking methodologies into consideration when hiring any future faculty for their colleges, it may be a misguided move considering the possibility that the dynamics of the methodologies may be subject to unforeseeable changes. Therefore, it may be advisable for universities to refrain from giving too much weight to the citations/publication index of applicants during any hiring of faculty. Nevertheless, at least for the time being, the current trend of making institutional decision based on university ranking methodologies is becoming ever more evident, therefore, it is something that any future faculty candidate needs to take into serious consideration as the requirement for faculty to have PhDs may be on its way to becoming outdated. Consequently, long years of studying in post-secondary institutions, not to mention the money spent on the lengthy education process may be losing its real value for at least a number of positions considering the general direction in which institutions are seen to be moving. Surely, all post secondary academic faculty are tuned to the issue as it is in their best interest to do so.

What is more, the academic world may very well see the circulation of academic publications as a direct contribution to the educational and career developments of academics, therefore, academic journals would certainly be seen as being increasingly more influential in the career development of

academic faculty worldwide. Undoubtedly, academic journals are becoming increasingly more prominent in the realm of higher education. This would certainly lead the academic world down an unknown path that few universities/colleges may be ready for.

Furthermore, Asian industries need to form stronger research coalitions with local universities so as to develop technologies unknown to the competition with the help of the scholars and students at the academic institutions. That way they could strengthen the international standing of not only the local post-secondary institutions but also improve the pickings from among the local graduates.

Overall, any Asian coalition would go a long way in counterbalancing the centralized (western) monopoly on higher education. After all, if the coalitions are not formed soon the imbalance will undoubtedly be harder to overturn. The time is here for Asia to act and to take lessons from the success of prevailing western coalitions. Moreover, this would ensure that the greatest Asian minds are not outsourced to higher ranked universities/industries (the competition) in the west.

On the whole, whether it is the various faculty, administrations or the industries themselves, they must all be aware of the changing dynamics in the world of higher education and learn to adjust to any alterations before the competition has the chance to do the same. Quite distinctively, universities appear to be establishing themselves more and more as research institutions. This trend is clearly shown by the 20% the QS World and the 60% the Shanghai Jiao Tong rankings designate toward the citations per faculty indicators in their methodologies. Not to mention the tendencies for certain universities to stipulate in their faculty job ads that a significant amount of conducted research has as much weight as a PhD. All of this points toward the increased significance of research and less of a focus on pure academics in the realm of higher education, therefore, all parties of interest should beware and prepare for any foreseeable changes as doing so may make their journeys in reaching their goals a little bit smoother.

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Appendices

Appendix 1:

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

ECOLOGY AND EVOLUTIONARY BIOLOGY

Comparative vertebrate physiology

Assistant Professor

The Ecology & Evolutionary Biology Department of the University of California, Santa Cruz invites applications for a tenure track position in comparative vertebrate physiology. Individuals whose research and teaching focuses on any combination of animal physiology, physiological ecology, environmental physiology or physiological aspects of functional morphology are encouraged to apply. We are particularly interested in individuals with an interest in issues related to marine vertebrates, who will utilize the excellent facilities available at Long Marine Laboratory, and who can take advantage of the diverse marine fauna of Monterey Bay. The successful candidate is expected to develop a strong research program, and to supervise graduate students, as well as teach undergraduate and graduate level courses in physiology or functional biology in the department. Successful candidate will be expected to interact closely with students and other faculty and as such, contribute to the diversity and excellence of the academic community through their research, teaching and/or service.

RANK: Assistant Professor

SALARY: Commensurate with qualifications and experience

POSITION AVAILABLE: July 1, 2009, with academic year commencing Fall 2009.

MINIMUM QUALIFICATIONS: A Ph.D. or equivalent in a relevant field; postdoctoral or **equivalent research experience**; a demonstrated record of research excellence and potential for teaching and mentorship at undergraduate and graduate level.

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(UC Santa Cruz, 2009)

Appendix 2:

Fixed-term Associate Professorship in English College of Arts and Sciences, The University of Tokyo

Number of Positions	one
Job Description	Teaching English for first- and second-year undergraduate students, and teaching a class in English for third- and fourth-year undergraduate students. (The appointee will teach eight 90-minute classes per week. The University of Tokyo has two 15-week semesters per year.)
Term of Appointment	1 April 2010 to 31 March 2013 (a three-year fixed term appointment with one possible renewal)
Required Qualifications	<ol style="list-style-type: none">1. Native speaker of English2. Specialization in humanities or social sciences, in particular, English-related fields3. PhD or equivalent research record in a relevant field4. Elementary knowledge of Japanese
Preferred Qualifications	<ol style="list-style-type: none">1. Specialist in American Studies or candidate who can teach Advanced Academic Writing2. Previous experience of teaching English at universities3. Living in Japan at the time of application <ul style="list-style-type: none">••

(U of Tokyo, 2009)

Appendix 3:

Faculty Position at UCC/Tyndall (06/06/09)

Samedi, 06 Juin 2009 00:00 Administrateur

A temporary faculty position is available from Sept 2009-2010 (renewal possible) in the Physics Department, University College, Cork, in association with the Tyndall Institute. The preferred areas are photonics, solid state electronics, terahertz physics, metamaterials or other area related to our ongoing research (see www.physics.ucc.ie or www.tyndall.ie). Salary approx 50k Euro (USD75k approx). The appointee is expected to teach undergraduate physics and do research with or related to one of our research groups. Applicants should have a PhD or **equivalent experience and appropriate portfolio of research experience and achievement**. Teaching experience is desirable but not essential.

UCC is a 160 year old full-spectrum university with about 20k students. Physics has 15 faculty and senior research fellows, 10 support staff, ~20 research staff, ~60 PhD students, 25 undergraduate majors per year. Tyndall has 350 people of whom ~100 work in areas related to photonics, most of these being members of UCC Physics.

Anyone interested please contact John McInerney at mcinerney@ucc.ie . Cutoff date for appointment will be mid August but earlier application will be advantageous.

We also expect to open a new search for a technical officer (PhD-level research and teaching support function) at a similar salary scale early in 2010.

(UCC, 2009)

Appendix 4 :

Postdoctoral Research Associate Position at the University of Pittsburgh

Spoken Dialogue / Intelligent Tutoring Systems

The [ITSPOKE](#) group at the University of Pittsburgh is seeking a postdoctoral researcher to join several ongoing projects in the area of spoken dialogue for intelligent tutoring systems:

- Monitoring Student State in Tutorial Spoken Dialogue
- Adding Spoken Language to a Text-Based Dialogue Tutor
- Tutoring Scientific Explanations via Natural Language Dialogue

The qualifications for this position are a PhD or **equivalent in a research** area related to Natural Language or Spoken Language Processing, particularly Dialogue. Interest and experience with intelligent tutoring systems, corpus annotation, speech, prosodic analysis, affective computing, adaptive systems, machine learning, empirical methods, and/or evaluation are especially desirable.

The position is located at the University of Pittsburgh in the [Learning Research and Development Center](#). The ITSPOKE group is also part of the [Natural Language Processing Laboratory](#) at the University of Pittsburgh.

The initial term of the appointment will be two or three years, with possible extensions as funding permits. The position is currently funded by grants from the National Science Foundation and the Office of Naval Research. Salary will be commensurate with experience, and includes full benefits.

Send a statement of interest and a vita to Professor [Diane Litman](#).

March, 2004

(U of P, 2004)

Appendix 5:

Research Position - Spoken Dialogue

A research associate or postdoc is sought to participate in a new project in the area of adaptive spoken dialogue for intelligent tutorial systems. The goal of this research project is to wed spoken language technology with instructional technology, in order to promote learning gains by enhancing communication richness. For further details, see a forthcoming [paper](#) describing the envisioned spoken dialogue system (to appear in the [ITS Workshop on Empirical Methods for Tutorial Dialogue Systems](#)), as well as information on the target back-end ([Why2](#), a text-based tutoring system in the domain of qualitative physics).

The qualifications for this position are a PhD **or equivalent in a research** area related to Natural Language or Spoken Language Processing, particularly Dialogue. Interest and experience with speech recognition, prosodic analysis, annotation, affective computing, adaptive systems, machine learning, and/or evaluation are especially desirable.

The position is located at the University of Pittsburgh in the Learning Research and Development Center. It is a one year research position with full benefits. Salary will be commensurate with experience. The research is funded by [CIRCLE](#), an NSF-funded research center that studies human and computer tutoring.

Send inquiries and CVs or resumes to [Diane Litman](#). The ideal starting date for the position is September 2002. We hope to make hiring decisions in the next few weeks.

May, 2002
litman@cs.pitt.edu

(U of P, 2002)