Special Issue

Role of Higher Education in Transforming India

on the Occasion of

90th Annual Meeting of the Association of Indian Universities

Sardar Patel University, Vallabhb Vidyanagar (Gujarat)
(February 05-07, 2016)
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Editorial Committee Chairman : Prof. Furqan Qamar

Guest Editor : Prof. Harish Padh

Editorial Committee : Mr. Sampson David

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Editor : Dr. Sistla Rama Devi Pani
World University Rankings: A Catalyst for Architecting World Class Universities for Transforming India

Prashant R. Nair*

“There was a time when India played a dominant role in the higher education system and we had renowned seats of learning like Takshashila, Nalanda, Vikramashila, Valabhi, Somapura and Odantapuri. However after them we have not been able to find a place in world rankings which is commensurate with our size, culture and civilization. India now has to work towards regaining that glory of the past.... In today’s era of globalization, which rests on the pillars of Collaboration, Cooperation and Communication, there are ample opportunities to use these “3Cs” to create many world-class universities”.

Shri Pranab Mukherjee, Honorable President of India

Higher Education in India

India has one of the largest, multi-faceted and complex higher education systems in the world with almost 779 universities and 40,000 Higher Educational Institutions (HEI). The Indian higher education is the third largest after China and United States of America (USA). Total higher education enrollment today is north of 25 million and on an average, five million graduate every year. Of this 2.5 million student enrolment, more than three million are Post Graduates and estimates point out that there are more 200,000 research scholars in various disciplines. The Gross Enrollment Ratio (GER) which is presently higher than 20% is inching towards the 30% average of developed countries with various initiatives from the government of India in capacity building like starting new IITs, IIMs, IISERs and Central Universities as also expanding and enhancing the existing ones. No doubt, India has taken great strides in Higher Education considering the fact that the GER of USA is 34% and China 28%. This remarkable growth in higher education and mushrooming of higher educational institutions has brought about its share of concerns and challenges. These include multifarious issues related to access, accreditation, employability, equity, faculty, funding, research, quality, and ranking.

India’s economic development and transformation is intrinsically linked to its education and skilling. Only an educated country can aspire to be a developed country. If India aspires to be the fastest growing economy in the world, it will need to ramp up the numbers of HEI as also architect ‘world-class’ institutions. By 2030, India is likely to be the youngest nation in the world with nearly 140 million people ready to enter the portals of an HEI. It will be interesting to note that one in every four graduates in the world will be a product of the Indian higher education system (FICCI Higher education report). Higher Education enrolment is key to leveraging the demographic dividend for the benefit of the society and community. HEI Numbers will have to be ramped up to cater to these numbers; this will require both extensive public and private participation and perhaps the advent of foreign universities as well.

Size does matter. But quality is needed as well.

The need for increasing HEI numbers is further complicated by the globalization, competition and knowledge-driven economy. ICT tools, Internet and social media have resulted in the explosive growth of knowledge. Knowledge is not only going to drive the Indian economy, but also, it is going to permeate into all the strata of Indian society for a better quality of life for its citizens.

The Indian higher education system needs to elevate itself in the knowledge economy by striking a balance between quality and quantity.

A multi-pronged strategy is the need of the hour. In addition to teaching institutions that primarily focus on skilling and teaching, here is need to promote many more “world-class universities”, who are hubs of innovation and research excellence. These drive innovation as also create new knowledge and transform the country into a knowledge superpower.

World-Class University (WCU)

Globally, World-Class Universities (WCU) are increasingly emerging as an indicator of global competitiveness in the knowledge-driven economy. Even though there is a lot of debate on what constitutes
a WCU? What are its ingredients? What are the parameters for measurement? Does research outcomes and funding alone need to be considered?

There is no denial of the fact that every country wants as many WCU as possible. The universities which can compete and be benchmarked with the best in the world. These universities are at the top of the pyramid and serve as fountainheads for creation and dissemination of knowledge. These drive innovation and thereby contribute towards societal goals.

By and large, international recognition & ranking and global perception are the key WCU indicators. The elite ivy-league universities in USA; Oxbridge in UK; IIT-IIM in India are globally recognized brands. The exalted positions of these institutions have not resulted out of any objective or subjective evaluation, but by decades or centuries of academic and research excellence.

The quest for the elusive WCU inevitably brings us to the issue of World University Rankings (WUR)

World University Rankings (WUR)

"Love it or Hate it, you simply cannot ignore it"

Today, World University Rankings (WUR) despite criticisms of its accuracy, subjectivity, usefulness or being tailor-made for universities in developed countries have become part and parcel of the educational landscape. Various rankings consider benchmarks and metrics relating to perception, internationalization, measures of earning, research impact, publications, patents and citations, selectivity, student success and options; something that every university must strive to improve. Interestingly, the number of Nobel laureates on the faculty is one criterion for a popular ranking.

One may argue that we don’t care for these rankings. But at the end of the day, the release of these rankings is reported extensively in global media. And every single time, this has created a furor and many a world leader to react.

President Vladimir Putin has committed resources to move five Russian universities into the top 100 of the WUR by 2020. In Japan, President Shinzo Abe has targeted that there should be at least 10 Japanese universities in the world top 100 by 2023. China is nurturing its C9 league universities like Tsinghua and Peking as a counter and challenge to the US Ivy league. Both Honorable President and Prime Minister of India have taken a lot of interest in this issue.

"India cannot aspire to be a world power without having a single world-class university... Apart from giving the nation, the institutions, its students and its alumni a sense of pride, a high rank can help attract quality faculty and meritorious students, open fresh avenues of growth and placement for students, and provide a benchmark for continuous improvement in standards”

Shri Pranab Mukherjee

This observation from the Indian president on many a occasion over the past couple of years, has no doubt galvanized several Indian HEI to consider rankings very seriously as also make them aspire to compete with the best-in-class. Many Indian HEI have started proactive engagements with the international ranking agencies like Quacquarelli Symonds (QS) and Times Higher Education (THE). 2015 has brought good tidings in terms of rankings of various Indian universities.

"Global rankings are important. But we should also set up our own parameters for rankings, which will serve as an in-built mechanism for change and improvement”

Shri Narendra Modi

While receiving the first copy of one of the rankings, Honorable Prime Minister of India, Shri Narendra Modi identified the need to link research and education to the development needs of the country. He emphasized the need for India to evolve an independent ‘India

Ranking’ metric which can then involve the SAARC nations as the existing systems are skewed towards Western Nations. The launch of the National Institutional Ranking Framework (NIRF) by Ministry of Human Resource Development (MHRD) as a result of the Prime Minister’s vision is a welcome step. This national ranking, which will evolve, adapt and improve over time, considers the ground reality for Indian HEI and universities.

“Ranking and Accreditation are two important tools for a movement towards quality... The Ranking framework will empower a larger number of Indian Institutions to participate in the global rankings, and create a significant impact internationally too.”
Smt. Smriti Irani, Honorable Union Minister for HRD, Government of India at the launch of National Institutional Ranking Framework (NIRF)

The NIRF has been launched with a dual purpose of not only ranking Indian institutions but also as a stepping stone for Indian universities to perform better in the WUR. New benchmarks of quality considering the Indian context have been defined to help the overall structure to move up on the quality scale. Compulsory accreditation and national rankings of Indian HEI will play an important role in improving performance and quality of academic institutions. However, the success of Indian universities in both international and national rankings will be influenced by how quickly and effectively, various limitations and bottlenecks of the system are removed by policy-makers.

History of University Rankings

HEI and University Rankings have been in vogue for quite some time; in USA, these have been mostly conducted by magazines and newspapers like US News, Forbes and Princeton Review. Some websites, government agencies or research centers like The Center for Measuring University Performance of Arizona State University have also been conducting such rankings.

US News has been regularly publishing rankings of USA universities since 1983. This has emerged as a trusted source used by many aspiring students in India and developing countries to make their choice of higher education in USA.

At both governmental as well as non-governmental level, i.e. magazines, many countries have their own country-specific rankings. The European Union first ranked their universities with highest scientific impact in 2003. The UK government has been ranking undergraduate teaching and research in their HEI through Quality Assurance Agency for Higher Education (QAA) and Research Assessment Exercises (RAE) respectively since 1997.

World University Rankings (WUR) however is relatively a recent trend having started in 2003. However, today, they are dime a dozen.

Various World University Rankings (WUR)

World University Rankings (WUR) made its debut in 2003. Since then, rankings and ranking agencies have mushroomed with multiple dimensions. There are rankings in continents like Asia, North America; groupings like BRIGS; subjects like economics or computer science; research impact; bibliometrics, website popularity, visibility and content etc. The following three rankings have emerged as the most popular, influential and widespread.

Academic Ranking of World Universities (ARWU)

In 2003, Shanghai Jiao Tong University compiled the Academic Ranking of World Universities (ARWU). This was the first WUR considering various parameters and administered at a global level. Presently this ranking is administered by Shanghai Ranking Consultancy. Although funded by the Chinese government and criticized for favoring Chinese universities, by and large, these have emerged as a credible WUR. Picture this, No Chinese university figures in the top 100 in the ARWU 2015 rankings, Criteria include:

- Quality of education measured by Nobel laureates and fields medal winners on their alumni (10%)
- Quality of faculty measured by Nobel laureates and fields medal winners on faculty and highly cited researchers as per Thomson Reuters (40%)
- Research output measured in papers in Science, Nature, Science Citation Index (SCI) and Social Science Citation Index (40%)
- Per capita academic performance of an institution (10%)

At first look itself, ARWU is heavily biased towards research indicators and does not consider teaching-learning process, reputation, infrastructure, employability and other factors. Universities with faculty or alumni who are noble laureates would steal a march. However this ranking motivates university researchers to publish their innovative and creative work in highly-cited journals and scholarly conferences. These rankings have been heavily dominated by US universities with Harvard leading the pack since 2003.

The success of these rankings and its global acceptability has spawned Academic Ranking of World Universities by Subject Fields (ARWU-FIELD) in 2007 and Academic Ranking of World Universities by Subject Fields (ARWU-SUBJECT) in 2009. ARWU-FIELD provides the world’s top 200 universities in five broad subject fields, including Natural Sciences and Mathematics, Engineering/Technology and Computer Sciences, Life and Agriculture Sciences, Clinical Medicine and Pharmacy, and Social Sciences. ARWU-
SUBJECT publishes the world’s top 200 universities in five ranked subjects, including Mathematics, Physics, Chemistry, Computer Science and Economics/Business (http://www.shanghairanking.com/).

QS World University Rankings

QS World University Rankings are a ranking of the world’s top universities produced by Quacquarelli Symonds (QS) and has been published annually since 2004. QS is an company based in the UK with interests in overseas education and career services. QS had partnered with Times Higher Education (THE) magazine from 2004 and 2009 after which they parted ways and THE launched their own rankings.

QS World University Rankings now comprises the global overall and subject rankings. QS WUR has also spawned three independent regional rankings (Asia, Latin America, and Brazil, Russia, India, China and South Africa (BRIGS)) with different weights and parameters. QS Subject rankings cover 29 subjects grouped in 5 broad disciplines namely engineering, biomedicine, natural sciences, social sciences and arts & humanities. Various QS criteria include:

- Academic Reputation (40%) based on global survey of peers,
- Faculty/Student ratio (20%),
- Citations per faculty (20%),
- Employer reputation (10%) based on global survey of employers,
- International student ratio (5%),
- International staff ratio (5%).

Some of the popular criticisms of QS rankings include reliance on survey data and the fact that the citations are drawn from Scopus. Some people argue for Thomson Reuters. Despite the differences like Scopus having more non-English journals or Thomson Reuters gives impact factor to journals, the key observation is that the intersection in the indexing by both Scopus and Thomson Reuters is very high. Scopus is part of Elsevier but the journals and conferences indexed by Scopus go through an independent review committee that considers various quality parameters. Interestingly, Times Higher Education (THE) has recently switched over to Scopus from Thomson Reuters. On the flip side, QS motivates universities to go international in terms of recruitment of students and faculty as also forge partnerships which contribute towards building academic reputation. Universities also need to focus on employability and perhaps the most important stakeholders, employers of their graduates. Good infrastructure or teaching-learning process would contribute in building academic reputation among peers (http://www.topuniversities.com/).

Times Higher Education (THE) World University Rankings

THE branched out from QS and joined Thomson Reuters to provide a new set of world university rankings, called Times Higher Education World University Rankings in 2010. Presently, THE has started partnering with Elsevier for publications and citations. Times has spawned into subject, international and reputation rankings and two regional rankings, Asia and BRICS & Emerging Economies (Over 50 countries).

The 13 performance indicators are grouped into five areas, which are as follows:

- Teaching (30%) based on reputation survey, staff-student ratio, doctorate to bachelor ratio, Ph.Ds awarded and institutional income.
- Research (30%) based on reputation survey, research income and productivity in terms of papers in Scopus.
- Citations (32.5%) in Scopus.
- International Outlook (5%) based on international students and collaborations.
- Industry income (2.5%) based on consultancy, innovation and partnership with industry.

Prima Facie, the THE Rankings considers more parameters of an HEI like faculty quality and terminal degree, institutional income, undergraduate teaching and teaching reputation as also a robust and extensive methodology. This is in addition to research and internationalization like QS. Popular criticisms are that QS are biased towards universities where the medium of instruction is English, especially with respect to citations and its reliance on survey data for academic and research reputation (https://www.timeshighereducation.com/world-university-rankings).

Other global rankings such as Webometrics Ranking of World Universities based on web presence have been in existence since 2004; Leiden University in the Netherlands has been bringing out a rank list since 2007; U_Multirank by EU since 2011; SCI-MAGO Institutions Rankings since 2009; Newsweek Magazine since 2006 etc.

(Contd. on pg.177)
juncture that we become students again and set out to learn what this great country needs. If Gandhi and Vivekananda could speak to the country as a whole it is because they travelled and discovered and uncovered the country for themselves. We, the policy makers, administrators, and teachers, will have to leave our AC offices and committee halls and step out into the real India that we wish to transform. It will be interesting as an experiment for our Professor Emeritus from posh universities in the national capital to go to the mofussil colleges in the most interior, unknown towns and teach a subject to the rustic and un-oriented youth of Bharat. It is a fact that higher education has gravitated towards cities and the rural youth still awaits his/her ‘transformation’. Unless we can discourse and think out of box for the transformation of the ‘Unto this

Last’, the most deprived lot of students, that John Ruskin and Gandhi aspired for, the rest is academic discussions ‘transforming’ during a ‘free lecture’!

References

(Cond. from pg.173)

From an Indian milieu, Both THE and QS are preferred to ARWU. Despite the criticisms, pro-active engagement and aspiration for WUR by Indian HEI will no doubt raise the bar especially in terms of research funding, patents, innovation and publications, industry-institute interaction, collaboration, internationalization, foreign students and employability all of which contribute to global recognition and reputation.

Indian HEI should join the WUR bandwagon and elevate themselves to become WCU.  

Amrita University In WUR
Amrita University is a multi-campus, multi-disciplinary, research-intensive university with 5 campuses, 18,000 students, 1800 faculty, 200 academic programmes, 4000+ Scopus-indexed publications, 13,000 citations and Rs. 200 crores in research funding.

Inspired by the Chancellor, the university has figured in the following WUR:

Times Higher Education Top 200 BRIGS and Emerging Economies Rankings 2016 rankings - Amrita University is ranked 181 in this international ranking of top universities in 53 countries. Amrita University is only private university out of 16 Indian institutions and universities in the top 200

Quacquarelli Symonds (QS) BRIGS 2015 rankings - AMRITA is ranked in the bracket 151-200 of top 200 universities in BRIGS countries. There are 31 Indian universities and institutions in the top 200. Amrita is ranked number one in International Faculty in India

Times Higher Education Top 1000 World University Rankings 2015-2016 – AMRITA is ranked in the bracket 601-800 in this international ranking of universities worldwide. Amrita is listed 111h among only 17 Indian Universities that have made it to world rankings and ranked number one in international outlook among all Indian universities (https://www.amrita.edu).