Public universities and research: In 2022 and beyond

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Tsinghua University broke into the top-20 in 2020. To get there, the University laid down a 27-year plan in 1993 in three steps to attain its world-class goal:

- 1993-2002: laying the foundation, adjusting the structure, and setting itself up as a comprehensive research university instead of as a teaching-research university focused on science and engineering.
- 2003-2011: making a breakthrough in some key disciplinary areas to "enter" the ranks.
- 2012-2020: become world class.

The fourth step is to decide on the disciplinary areas (as in China) that will be supported. Because available resources are unlikely to be abundant, it is best to start small, keep the focus narrow, and build around its successes. Along with selecting key disciplinary areas (basic science, medical science, engineering, agriculture, social science, and the arts and humanities), a limited number of universities must be designated as research universities that may comprise a national innovation or knowledge system. More universities, as they meet requirements, will come under this canopy in time.

Selective support for research institutions is widespread. In addition to China's C-9, the Malaysian government upgraded four institutions into research universities, and Universiti Sains Malaysia (USM) into an Apex University.

Another strategy may be to strengthen already well-developed areas such as agriculture (BARI), health (ICDDR, B), poverty studies (BIDS, but scattered and rich), flood control (BUET), urban development (Bengal's BIALS), climate change (ICCCAD, IUB), etc. Other areas based on national priorities must be brought into the ambit: mental health, sexual violence, gender roles, the creative arts, demographic dividend, traffic management, pollution, human resource development, etc. The role of the public universities must be strengthened in these areas. And good research "must" be incorporated into teaching.

PHOTO: COLLECTED

▲ When teaching is research-led, the learning of both teacher and student is greatly enhanced with deep potential impact.
PHOTO: STAR

What fields and which universities ought to be selected for focused research should evolve from a national consultative process involving various stakeholders but led by the academic community. This discussion may be organised by a lead agency like the National Research Council discussed subsequently.

The fifth step will be to develop an ecosystem to support targeted research. This ecosystem must be conceived of at micro (laboratories, technology, access to global research, proper classroom and related facilities, etc.) and macro (budgets, institutions, industries, government agencies, civil society, etc.) levels. The intent is to create a wide set of producers, consumers, partners, sponsors, and support systems—in essence, a market—for research to flourish with many positive externalities.

For the ecosystem to be vibrant, leadership at multiple levels is vital. This involves faculty, department heads, deans, and vice chancellors, playing key roles (developing innovative research tracks, raising funds, cultivating partnerships, ensuring compliance, etc.). Industry leaders, a facilitating bureaucracy, and influential political stalwarts—all must play as a team to build the ecosystem where resource exchange is ensured (e.g., industry providing funds and universities providing knowledge in return). As the ecosystem evolves, tax strategies must be devised for industries or organisations that step forward to partner with the research universities.

The sixth step is to select research leads (experts) at the universities as anchors and allow them to form teams and chart the research agenda. For technical and natural science-based research, it would be important to assess the existing research infrastructure to avoid duplication. Significant investments have already been made in facilities and equipment in the nation's public universities. But one would be hard pressed to find any accounting of such investments which usually leads to malfeasance. A full inventory of what is available for research is critical to taking the big leap in the sciences.

Funding these initiatives "fully" will be vital. In addition, quality assurance of research must also be ensured. For example, the National Science Foundation in the United States, is an independent federal agency created by Congress "to promote the progress of science; to advance national health, prosperity, and welfare; to secure the national defence..." While working on the Strategic Plan for Higher Education for the University Grants Commission 2018-2030, my team had proposed the need for a similar entity called the National Research Council (NRC). The idea gained support from the highest levels of the government, but how far it has advanced remains a moot question.

Once the NRC is established, with inputs from multiple stakeholders, including facilitators of high-class research (e.g., outside agencies or organisations like IFPRI), all research in Bangladesh funded by the government and international bodies would be registered with it and monitored (not interfered with) so that at any point in time, a comprehensive perspective is available on knowledge activities in the country. Today such information is sorely lacking. The NRC must also have a pool of funds, renewed every year, for research on the government's priorities. To ensure quality, the NRC would get research proposals vetted by experts drawn from academia, the relevant stakeholders, as well as international experts.

The seventh step is to implement the research projects. For this matter, the teams (in step six) must have primary responsibility for the details (budgets, hiring, training, motivating, implementing, evaluating, and rewarding). These teams must specify measurable research outcomes (quality journals, citations, impact, usefulness) for subsequent assessment. For cutting-edge research, the NRC may seek to bring in outside expertise, including from the diaspora, to enable local researchers to ramp up quickly.

House cleaning must be given serious consideration at this stage for the research universities to excel by moving non-productive researchers elsewhere. Political economy will likely determine who will stay and who will move. The process will be divisive, but ground rules established jointly will help. For example, research goals may be established, monitored, and evaluated. Over a defined period (roughly 3-5 years) it will become clear who stays and who goes. An alternative house cleaning mechanism is to provide historically ascertained non-performers a lucrative severance package or golden handshake. Individuals who recognise their limitations will quickly shake hands and move on.

The eighth step is to incentivise high performers. While compensation packages are important, other incentives should also be devised, including fast-track promotions, perks, titles (such as Chaired Professors), travel grants, seed grants, etc. Whether teaching and research faculty should be equally remunerated also requires serious consideration. The determination of incentives must also be tightly managed, made fully transparent, and kept free from external influence using committee-based decisions.

Finally, the research projects/programmes must be reviewed annually. The process must be based on clear metrics, comprehensive, and acted upon diligently. The review reports ought to be combined (preferably at the NRC) to generate a public document on the state of research in the public (and private) universities. There is no such document today. China's education system has assiduously undertaken such review while building its research infrastructure under The Development Plan that led to continuous reforms. One idea is to mandate that all universities (and research institutions) must annually report their research activities in a prescribed format. Good information can help calibrate and guide proper research and desired outcomes.

Building research universities in Bangladesh will be arduous. Capability in the public universities to undertake high quality research is decidedly weak; this is a major impediment. A constant refrain of junior faculty members is their lack of training in research methodology, but the seniors don't seem to care. The political landscape in academia is also vitiated. Questions abound whether faculty leaders (heads, deans, VCs) are capable individuals or simply individuals with clout. House cleaning is most important here as well as in the UGC. Other limitations, far too many to list, raise the question: Who really is in charge of higher education? Pursuing what purpose?

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