How: Best Practices in U.S.-India Higher Education Partnerships

In every edition we will have an article from a higher education leader explaining how they launched a U.S.-India partnership and what they are doing now. This edition's piece is by Ms. Heather McKay from Rutgers, The State University of New Jersey's School of Management and Labor Relations.

Between 2012 and 2016, Rutgers, Pennsylvania State University (PSU) and the Tata Institute of Social Sciences (TISS) partnered through the 21st Century Knowledge Initiative Grant. Over the four-year period we developed a collaboration that led to a strong cross-national exchange and co-development of programs on higher education and workforce development in India and the United States. The effort was a true partnership from the writing of the grant to the execution of the different strands of the project.

Under the grant, we developed study tours in each country for students and academics to meet scholars, see campuses and educational activities in action, and conduct qualitative data collection. We held multiple research seminars in each country and conducted three leadership academies for higher education practitioners. During each of these activities, we worked hard to promote dialogue, making sure that experiences from both countries were shared. Our work resulted in some new research strands, the development of educational policy, and continued relationships between Rutgers, PSU, and TISS scholars.

While I view the project as a success today, it was not without its challenges. We had to learn and shape what we were doing along the way. One example was in the higher education leadership work. Our first two sessions of the academy took place in the United States and the third in India. At the close of each meeting, all three partners along with representatives from the World Bank sat down to think about how we could better foster collaboration, sharing, and learning for participants from both countries. One important concern was to make sure the leaders from India felt comfortable sharing their experiences and perspectives with the group. These conversations led to important delivery and locational changes over time.

Since the grant, Rutgers has continued to develop research and sharing partnerships with institutions in India, including the Rutgers-Newark College of Arts and Sciences with the National Centre for Biological Sciences, the Rutgers School of Environmental and Biological Sciences with Sir Vithaldas Thackersey College of Home Science and Shreemati Nathibai Damodar Thackersey Women's University, and the Rutgers School of Dental Medicine with Saveetha Institute of Medical and Technical Sciences. We hope overtime that more connections will be built for mutual sharing and learning.
What: A Deep Dive into a Bi-national Project

In every edition we will also highlight a particular bi-national projection and its current or planned outcomes.

This edition's piece is an opinion piece by Dr. Chintan Vaishnav from Massachusetts Institute of Technology (MIT).

The MIT Tata Center was founded in 2012 with generous support from the Tata Trusts, one of India’s oldest philanthropic organizations, with the objective of training engineers, scientists, and social scientists to develop solutions with tangible impact on challenges confronting resource-constrained communities. Over the past years, it engaged over 100 graduate students and over 60 faculty members at MIT to embark on over 40 projects spanning the areas of health, water, agriculture, housing, energy, and environment in India, Nepal, and Africa. In 2014, a sister-center was founded at the Indian Institute of Technology, Bombay (IITB).

The collaboration between MIT-IITB Tata Centers worked at multiple levels. In the initial phase, the research, teaching, and programmatic templates developed at MIT were adapted in the context of IITB. The elements of the MIT environment that were found particularly attractive to the then IITB setting were the culture of “making,” the expectation that development research will be done with the same rigor as any other scientific or engineering research and that entrepreneurship will be the primary translational path for such work. In the steady state, the centers partnered through annual symposia at MIT and IITB, joint orientation of incoming students, and joint research by the faculty.

The benefits of such experiments are realized over a long time and along many dimensions, making the measurement of their impact a complex task. Arguably, their most important output is the people. Today, the trained students and faculty are continuing to translate their research into impact via entrepreneurial endeavors such as startups, licenses, and policy changes; or via crafting a well-rounded vision of sustainability through the leading organizations they have joined; or via training young talent to undertake similar work through the faculty positions they have occupied in the other top universities. Another dimension of output is the pedagogical frameworks, which are pushing higher education to go beyond merely publishing research.

Successfully translating research output to impact is a long pursuit well beyond the university as this is where the academic output meets the ecosystem that enables taking the solutions to communities at scale. Creating institutions that can support researchers, nurture relationships built between academics and practitioners and communities, and help deliver the benefits of such work to communities is the next frontier we have to conquer.

Indian Perspectives: Powering Solar Cells – The Boston University and IIT Bombay Partnership

The U.S. government and the embassy in New Delhi are supporting research carried out by Boston University in collaboration with the Indian Institute of Technology Bombay in the area of solar energy.

Project Overview

The team at Boston University, led by Dr. Malay Majumdar and Dr. Mark Horenstein, and at Indian Institute of Technology (IIT) Bombay, led by Dr. Sudhanshu Mallick and Anil Kottantharayil, are addressing two critical problems related to solar power. The first is the dust deposition on solar connectors that can reduce their efficiency. Second, the overuse of water to clean solar cells. To address both these issues, the researchers are working on creating electrodynamic screens for self-cleaning of solar panels for global applications. The
teams are also testing the efficiency of the screens in a real-world setting to determine their quality, efficiency, and applicability.

**Interaction at IIT Bombay’s National Center for Photovoltaic Research and Education**

The principal administrator of Partnership 2020, Dr. Patrick McNamara, and a representative from the U.S. embassy in India, Anubhooti Arora, met with researchers at IIT Bombay this January. IIT Bombay is co-implementing a project with Boston University titled “Growth of Renewable Energy Industries in India and in the U.S. with Water Conservation.” One of main goals of this project is water conservation. Traditionally, high volumes of water are used for cleaning solar apparatus and plants, which leads to serious water shortages for communities. Both teams are working on complementary technologies and testing them in laboratory and real world settings.

![Dr. Patrick McNamara and Anubhooti Arora with researchers at IIT-Bombay.](image)

**Best Practices in Partnership Development**

Some clear lessons on building strong partnerships can be drawn from the visit. Strong research partnerships are based on complementarity where there is parity in the relationship. Second, that the involvement of the next generation of research scholars is vital to propel the research agenda forward and train a cadre of young researchers. Third, we also commend the inclusion of positive community impact and focus on sustainability as an integral part of the research project. Partnership 2020 emphasizes the need to leverage diverse sources of funding. This project meets that criterion. On the U.S. side, this research is currently being funded by the Department of Energy and Massachusetts Clean Energy Center. On the Indian side, IIT Bombay’s National Center for Photovoltaic Research and Education (NCPRE), the project implementer, has large grants from India’s Ministry of New and Renewable Energy. Finally, the project is creating economic value by providing impetus to local industries working in the area of solar energy production and through water conservation.
**Funding Opportunities**


**Application Guidelines**

**United States-India Educational Foundation (USIEF)** 2021-2022 Fulbright-Nehru Master’s Fellowship for Indian citizens wanting to pursue education in the U.S.

**Application Guidelines**

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**Policy Updates**

**University Grants Commission (UGC)** has developed an optional life skills (Jeevan Kaushal) curriculum for undergraduate students at universities and colleges in India.

**Read More**

**UGC notifies** list of seven universities, following up on the Budget 2020-21 announcement that 100 top higher educational institutions will offer full fledged online degree programs.

**Notification**

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**Employment Opportunities**

**University of California, Berkeley** is inviting applications for Hindi Language Lecturer Pool.

**Apply Here**

**Department of Physics, Ashoka university** is recruiting six to eight faculty members over the next two years. Foreign nationals are welcome to apply.

**Application Guidelines**