



**HUMAN RESOURCE DEVELOPMENT FOR THE NEW
KNOWLEDGE ECONOMY- AVENUES FOR INDO-US
CO-OPERATION**

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INDIA

THE KNOWLEDGE ECONOMY OF THE COMING DECADES

- We are on the threshold of a new era in the history of human civilization- the Knowledge Era
- Knowledge and intellectual skills are central to the economy of the knowledge era
- Knowledge management in all its facets is a human centric activity
- Education, more generally human resource development and capacity building, therefore holds the key to the knowledge economy

India with its billion plus population and a favorable demography sees a window of opportunity in the knowledge era

The Higher Education scene in India- Looking back

- A Country committed to Science and Technology for Development
- With literacy levels far below 100%, primary and secondary education is a social responsibility
- Recognized early that higher education is an economic necessity
- Quality versus quantity has been a perennial problem
- A number of globally competitive Institutions (IIT's, IIM's, IISc, AIIMS, NIPER, selected Universities and Institutions) amongst a large background of mediocre institutions
- The premier institutions stand on three legs- a very selective student intake, well trained faculty, competitive infrastructure(laboratory, library, linkages etc.)
- The system has delivered- a number of national challenges addressed successfully, alumni across the world
- A huge demand-supply mismatch and distorted student priorities

The Higher Education scene in India- Looking forward

- Government commitment to increase the number of premier institutions and the investments on higher education (example: announcement of US \$ 33 billion over the next 7 years to start more IIT's, IISER's, IIM's, NIPER's etc.)
- Increasing private investments on higher education(thanks to enabling government policies and increasing public perception that education holds the key for economic upliftment)
- Increasing Public-Private Partnerships in higher education(example: TIFAC CORE's, Industry sponsored Schools and Centers of Excellence)
- India operations of Foreign Universities
- Resources are no longer seen as a constraint

The Higher Education scene in India- Looking forward

- **Student intake is not a major issue- IIT's and IIM's admit no more than a few percent of the aspirants.**
- **Increasing number of 2 Tier Institutions trying to improve their standards to match the premier institutions**
- **Decreasing drop out rates in schools leading to an increase in the the number of aspirants for higher education**

The Higher Education scene in India- Looking forward

- Fairly robust communication infrastructure
- Weak laboratory infrastructure for teaching and research- being addressed through increasing investments on shared facilities, access to international facilities through inter-governmental and inter-institutional agreements

The Higher Education scene in India- Looking forward

- Chronic Faculty shortages even in our premier institutions
- A teaching career in a premier institution is a late entry proposition- takes nearly ten years to groom a good teacher
- Increasing career options, attractive salaries in some high demand streams in industry, globalization of the market place for trained personnel, all dissuade potential students away from teaching careers
- The career profiles and the compensation packages are rarely competitive
- Considerable dilution of the traditional aura associated with the teaching profession in the social value system
- Disaster in making with no no quick-fix solution

Probably the biggest challenge to India and to the world

The Indo-US co-operation in Education and Research

- **A tradition of more than five decades (IIT,Kanpur, SITE, Green Revolution)**
- **More recently (Indo-US S&T Forum, Several sectoral initiatives)**
- **Sub-critical, lack of focus, lack of continuity**
- **Can we configure an ambitious Indo-US faculty nurture programme?**

Indian Participation in US led Mega Science/Technology Projects

- **India has been participating in a number of International Mega Science/Technology projects like CERN/LHC, ITER**
- **Unique models of participation (Partnership in place of a donor/recipient relation)**
- **Consortium of Indian scientists, students and industries as participants**
- **Can we configure a few US led Mega Science/Technology projects in which India can participate as a partner?**
- **There is no better way of linking the Indian educational system to the US skill set requirements.**

IN CONCLUSION

- **The knowledge economy of the coming decades will require increasing number of people with unique knowledge and intellectual skills**
- **While India is demographically endowed with ample young people in the educatable age group, the educational system is not yet tuned to impart education of the right kind in right numbers**
- **Institutions of higher learning in India face major constraints in faculty availability and in building a research environment**
- **India and US have a common stake and new opportunities for co-operation in addressing these constraints and create a win-win situation**