

NASSCOM's Education Initiatives

Sustaining India's talent edge to fuel the next wave of IT-BPO industry growth

India offers a unique combination of attributes that have established it as the preferred offshore destination for IT-BPO, abundant talent pool being the key one. From India's young demographic profile (an inherent advantage), to its vast network of academic infrastructure that churns out 3.1 million graduates annually, to its English-speaking workforce, the country offers an unmatched mix of human-power benefits to organizations.

Despite the strong fundamentals (of a disproportionately large talent pool), already there are growing concerns about parts of the existing available talent pool being unsuitable for employment due to a skill gap.

It's become imperative to enhance the Indian talent pool to maximize the industry's potential and enable the sector to further catalyze the country's galloping economic growth rate.

To address this challenge, NASSCOM and the Indian IT-BPO sector have taken the lead in ensuring that requisite remedial actions are undertaken – well in time – to avoid any form of a talent crisis.

NASSCOM has over the last few years created a major workforce development platform and launched several initiatives, in partnership with the Government and academia that aim to bring positive changes to the Indian education system and its orientation towards building employable students.

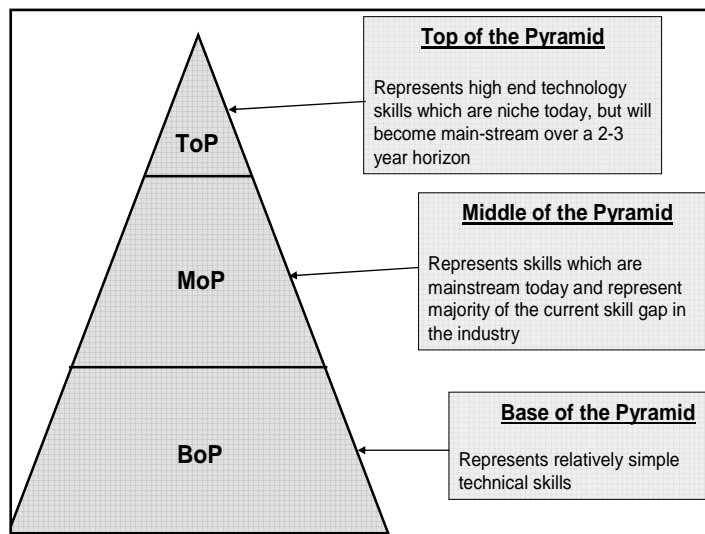
Various studies including NASSCOM-McKinsey Study 2005 throws up some interesting insights to validate India's positive human-power status:

- The number of IT-BPO professionals employed in India grew from less than 200,000 people in 1998 to over 1.6 million in 2007, largely because of the country's demographic profile and network of high-quality academic institutions.
- India currently has around 347 institutes of higher education and 16,885 colleges with a total enrollment of over 9.9 million. These produce around 495,000 technical graduates, nearly 2.3 million other graduates and over 300,000 post-graduates every year.
- Even at current levels of employability, India has the largest pool of suitable offshore talent, accounting for 28 percent of the total suitable pool available across all offshore destinations.
- India's emergence as a preferred outsourcing destination has created the need for about 2.3 million professionals by 2010. Based on current estimates, a shortage of 0.5 million skilled knowledge workers may arise if remedial action is not taken.

The Pyramid approach

NASSCOM has taken the employment pyramid approach to better understand the industry's skills requirement and create specific education and development initiatives basis that approach; most recent being working with Ministry of HRD to **set up new IIITs and Finishing schools and extending NASSCOM Assessment of Competence (NAC) to IT services sector.**

The base of the pyramid represents simple technical skills (including entry level jobs in the BPO industry and vocational jobs like networking, hardware maintenance, etc.). The middle stands for skills which are mainstream and account



for the majority of the existing shortage in the industry, while the top of the pyramid, represents high-end technology skills (in areas such as bio-informatics, embedded software, product architecture, DSP, VLSI, program management and multimedia convergence), which are niche today, but will become mainstream in the near future.

NASSCOM's Educational and Workforce enhancement initiatives

The Top end of the Pyramid

One of the biggest human-power challenges being faced at the level of higher-end education is the paucity of Ph.Ds and research scientists. Currently, post-graduate education is lagging behind undergraduate learning, with barely a handful of takers for the top-of-the-line Ph.D programs.

1. **Set-up new IIITs** - NASSCOM has been working with Ministry of Human Resource Development on a proposal to create "top of the pyramid," highly specialized professionals with skill sets in emerging, "on-the-horizon" technologies that are not yet mainstream. These will typically include research in areas such as banking, insurance, analytics, remote sensing, water, agriculture, energy, transportation, environment, geosphere, natural sciences, nanotechnology, healthcare, networks and mobile computing, image processing, and cyber security, among others.

The aim of these institutions will be to:

- generate cutting-edge research and technology
- enhance and produce competent professionals and engineers
- incubate new companies and clusters
- nurture existing clusters of knowledge-based companies

Ministry of Human Resource Development (MHRD) with support from NASSCOM and the IT industry has recommended **the launch of five new IIITs (Indian Institutes of Information Technology), based on the Public-Private Partnership model, by the year 2008. In all, the Ministry of Human Research and Development aims to set up around 20 IIITs over the next few years.**

The Middle level of the pyramid

This area represents the skills which are most commonly required by the IT services segment. It is also the market that is expected to face the largest skill shortage and a number of NASSCOM initiatives have been focused at this level.

1. **NAC-Tech-** Encouraged by the success of its Assessment and Certification program (NAC) for the BPO sector, NASSCOM is looking at offering a similar testing and accreditation offering, NAC-Tech, for the IT services sector starting this academic year. The aim is to make NAC-Tech an industry standard for evaluating students aspiring to find jobs in the technology/engineering industries. NAC-Tech will also help the industry, academic institutions and individual colleges to understand the potential of their students and determine their caliber, in terms of industry relevance and employability.
2. **IT/Engineering Finishing School** – Another pioneering initiative by NASSCOM in partnership with the Ministry of Human Resource Development is the "Finishing Schools for Engineering Students" program, which is expected to enable young technical graduates to become industry-ready.

The “Finishing School” for engineering graduates who are still seeking employment has been launched in a pilot mode in May 2007. The pilot has been conducted during the summer months of May-June, 2007, for a period of eight weeks in eight institutions, including IIT Roorkee and seven NITs—Calicut, Durgapur, Kurushetra, Jaipur, Surathkal, Trichy and Warangal.

The “Finishing School” is covering the curriculum provided on technical and soft skills development. The students will get an opportunity to reinforce some basic engineering skills and in addition, acquire industry-specific knowledge and skills, soft skills, and management and employment skills, which are being delivered by trained faculty and practicing IT and ITES industry consultants.

As part of the program, the students will also receive periodical feedback on their performance and undertake a final exam that highlights their ability in the area of rational, analytical thinking processes identified in a problem solving environment. The students will have the opportunity to take the NAC-Tech (NASSCOM Assessment of Competence–Tech), an employment benchmarking test and participate in a Job Fair.

3. **The IT Workforce Development (ITWD) program-** The initiative was created keeping the issues and concerns of the industry at one end and challenges of the academia at the other end.
 - As part of this initiative, NASSCOM has been nurturing the IT industry-academia interface through workshops and conferences, faculty sabbaticals, training programs and mentorship initiatives to ensure better synchronization between IT education and the industry requirements. **The one-day industry-academia workshops for instance, have already been held in Kolhapur, Madurai, Tirupati, NCR, Dharwad, Coimbatore, Jaipur, Vizag, Lucknow, Hyderabad, Kolkata, Pune and Chennai.** These have helped improve industry-academia interactions within different regions, enable a flow of information and discussion on the IT industry and create a plank for experience sharing. The faculty training workshops (or sabbaticals) are enabling faculty to realize the gaps in the present style of teaching and the approach to take in the core areas.
 - As part of the **mentorship program**, IT companies are providing consistent and continuous guidance for over 12-24 months to a particular college(s)/institute(s) and enabling it to transform into a center where quality education is imparted.
 - Closely **working with academic bodies such MHRD, AICTE and UGC** to standardize the curriculum and pedagogy
 - **Encouraging research and survey-oriented projects** to showcase the best practices in the area of industry-academia alliances and developing White Papers on certain fundamental and critical requirements such as curriculum, information on engineering institutions and skills sets desired/available pan India.

The bottom of the pyramid

In order to develop entry-level human-power, especially for the BPO industry, and equip them with relevant hard and soft skills that ensure employability, NASSCOM has launched a key endeavor, the NAC.

1. **NASSCOM’s Assessment of Competence (NAC)** - NAC was launched as an industry standard assessment and certification program to ensure the transformation of a "trainable" workforce into an "employable workforce" hence creating a robust and continuous pipeline of talent for the BPO sector.

NAC successfully completed its pilot phase in 2006 and was rolled out in Rajasthan where 2500 people took the NAC test. A job fair was held in association with the Department of Information Technology & Communication (DoIT&C) and Government of Rajasthan after the scores were released in Jaipur in March 2007.

Now NAC is being taken to the next level, by proliferating it across Tier II and Tier III cities and towns that can be strengthened into BPO hubs and used as playgrounds for nurturing job-ready professionals. **By the end of the year, NAC will be rolled out in various states of India, including Tamil Nadu, Gujarat, Chandigarh, Andhra Pradesh, North-Eastern States and West Bengal amongst others.** In order to build a mindshare for NAC, awareness campaigns are being organized at colleges/universities in these regions, before the test is conducted. Students are being briefed about the BPO industry and the opportunities it offers in terms of jobs

In the future, NAC will help align educational curriculum offered by universities and colleges in the country with the needs of the ITES-BPO sector. The initiative is also expected to help ITES-BPO players reduce their hiring costs, improve efficiencies, enlarge the candidate pool and perhaps more importantly reduce; if not remove the current escalation the market is seeing in entry level wages.