

Trends and challenges of the indian it-ites industry



Introduction

Information technology is one of the most important industries of India.

Though in the 1970s high import duties have forced many IT companies to leave India including IBM, the liberalization of the Indian Economy, starting from the beginning of the 1990s, has attractive many multinational companies to start their operations in India. In the meantime, home grown IT giants like TCS, Infosys have experienced an enormous growth slope.

As more growth is forecasted in the IT sector, hence the need of the hour is for an efficient and innovative human resource work force in this industry. This calls for a radical change of Education policies in India.

This report is an attempt to look at the trends and challenges of the Indian IT-ITES Industry and the Education and Skill development reforms formulated in the Indian scenario.

Global IT and ITES Industry

Global technology spending on hardware and IT-ITES was about US \$ 1. 7 trillion in 2007 and growing at a CAGR of about 7% in the last two years before 2007. Moreover engineering and R&D spend was about US \$ 800 billion.

Fig: GLOBAL TECHNOLOGY SPENDING IN 2007

According to ' Economist Intelligence Unit':

“ Most governments correctly view the IT sector as an important engine of economic growth, and many are taking measures to stimulate sector output

as a means of accelerating economic recovery. More important to long-term IT sector competitiveness, however, is sustained attention to the factors in the industry environment which enable IT firms to compete effectively.

These include the quality of the local technology infrastructure, the availability and quality of IT talent, the innovation environment, the legal regime, and the overall business environment, as well as the government's technology policy itself-all central pillars of the IT industry competitiveness index."

In spite of the recession, India has picked up the acceleration in the growth rate in IT-ITES Industry. However according to an IMA CS analysis, India accounts for only 4.5% of the global market.

India's IT-ITES Industry

The Indian IT-ITES Industry has become attractive with global service delivery capabilities with regards a number of aspects like cross-border Mergers and Acquisitions, Greenfield initiatives and Information Security environment issues. Many global players have already established RnD centres in India. Companies in India are rapidly standardising their processes to align with global processes, most notably in ISO, CMMI, Six Sigma, etc.

The growth rate of India's IT-ITES Industry could be visualised from the figure shown below.

Fig: Growth rate of Indian IT-ITES Industry

It should be noted that exports still constitute a majority of the revenue of the IT-ITES sector in India.

Different ' Industry Verticals' of the Indian IT-ITES sector are as follows:

Banking , Financial Services and Insurance (BFSI)

Hi-Tech and Telecom

Manufacturing

Retail

Healthcare

Airlines and Transportation

Revenue distribution in these verticals is as follows:

Fig: Revenue distribution amongst the different industry verticals of India's IT-ITES sector.

EMPLOYMENT IN THE IT-ITES INDUSTRY

The IT-ITES Industry currently has employment strength of more than 3 million persons. Moreover the productivity (which is measured as revenue generated per employee) is also showing an increasing trend. A bulk of the employees contribute to the Exports rather than to the Domestic market (as could be observed from the following Figure)

Fig: Employment and Productivity figures of the Indian IT-ITES Industry

A KPMG report in 2003 has mapped the different skill requirements according to basic skills and other skills based on the candidate's profile against different functions of the IT-ITES industry.

Fig: Mapping of skills to functional requirements

Some of the major aspects and trends that would have a profound effect on skill requirements for IT Industry are as follows:

Greater demand for a skilled work force

Newer pricing models

Transformation from IT Services to IT Consulting

Latest technology like Green IT and Cloud Computing

More stress on Innovation

More importance of Infrastructure Management Services

Growth of Indian market

Similarly, the major aspects and trends that would have a profound effect on skill requirements for ITES Industry are as follows:

More and more business processes which were viewed as 'core' and 'risky' are outsourced to India

The BPO sector will continue to concentrate with the 'volume business' while KPO sector will continue to play a niche 'value player'

Patent advisory, high-end research and analytics, online market research, and legal advisory are future avenues of KPO

More end-to-end service offerings in the domestic market

According to NASSCOM's ' Perspective 2020', the growth of the Indian IT-ITES Industry is projected at a CAGR of 12. 8% from FY2008 to FY2022

Fig: Growth of IT-ITES Industry in India

Most likely projection of Human requirements of the IT-ITES Industry in India is as follows:

Fig: Projection of Human resource requirement

Regarding job creation in the IT Industry, according to Mr Heitmann of SAP, “ Instead, they (new jobs) will be in China, India and theUS-whenever you have the flexibility to respond to significant changes in the marketplace.”

Below are the scores related to the Human Capital in major countries of the world.

Fig: Human Capital score of major countries

The Task force on meeting HR challenges in IT and ITES

A task force on meeting the human resources challenges for IT and ITES industries were formed by the Department of IT, under the Ministry of Communications and IT, Government of India. The task force tabled its report in December 2003, the recommendations of which are relevant even today. They were assisted by NASSCOM and KPMG in the form relevant analyses, global comparisons and practices. The team also had representatives from leading IT companies like TCS, Infosys, Wipro etc and academicians from prominent universities and schools and also from UGC, AICTE etc.

The main agenda was to make a plan aimed at meeting the HRD challenges for IT/ITES during 10th and 11th five year plan periods. They found that bridging the man power requirement gap for the IT/ITES needs a multi-faceted approach, namely:

Growing the number of graduates and expand the share of those entering the workforce

Generating awareness and preference among working graduates, even in Tier II and small cities

Improving the recruitment conversion ratio through changing the education system and counselling

In order to achieve this, a life cycle framework was devised as given below:

Attracting resources to IT/ITES industry:

Create an IT/ITES opportunities awareness fund with Industry support:

A central body representing the industry to administer such a fund aimed at creating awareness of the industry in small towns through advertisements, seminars, and skill development sessions to the potential work force. The fund can be raised through a voluntary 'cess' from the industry

Leverage the infrastructure of formal education system to provide career counseling to students in Tier II and smaller towns

Provide fiscal incentives for expatriate talent to invest in R&D

Incentivize use of telecom and network equipment to facilitate working from home

Educating/developing required skills:

Bridge the gaps in formal education to develop the skills required for the industry

Update the curriculum more often and according to industry requirements

Revamp the scheme of evaluation to encourage creativity and learning

Develop specialized vocational courses to bridge the drop out from formal education and to equip them with employable skills

Establish global linkages and expert networks in the formal education system to make more effective

Promote alternative languages like German, French, Japanese etc

Revision of R&D funding norms for universities and colleges, from the current plan-based system to generous performance-based system

Networking of institutions in the graduate and post graduate levels to build social capital

Specified funding support to faculty training and development

Educate and impose discipline associated with information security compliance

Support alternative use of the facilities of the IT/ITES industry for domestic purposes to leverage on the existing infrastructure

Tax incentives for vocational training institutions and companies promoting them

Certifying skill levels of resources

Coordinate the efforts to develop, a nationwide common online test for ITES (IICT)

The test will receive initial partial funding from Government and from industry. Later on, this should be a self-sustainable model

Non-government, industry approved national body for administrating the test to ensure quality of the output

The design standards for IICT should be based on industry requirements and updated frequently

Deploying trained/certified resources

Reform labour laws to encourage part time and temporary working so that the skill sets are utilized to the maximum

Create a database of trained and certified personnel and trainers for the IT/ITES industry

Monitoring and guiding efforts related to IT/ITES and R&D

Use industry/institutional inputs to make ' National Technology Plans' on R&D focus areas to make India a global R&D hub

Midterm reviews and corrective actions to be undertaken by dedicated team every 2-3 years as part of the plans

Education and Skill development in India

The education in India can be classified to primary, secondary, higher secondary and higher education all of which come under the ministry of HRD. The skill development programmes like ITI/ITCs and vocational training comes under the ministry of labour and employment and various others.

The population of India in the age group below 25 years is set to be in an advantageous position for India and is expected to stay the same even in 2022. This is at a time when the leading European nations, Japan and even China will be ageing countries.

This throws tremendous opportunities for employment for Indians for which they need education and skills. The number of people who will enrol for education is given as below:

The critical question is the availability of the educational institutions to them, which is clearly a concern as is seen from below:

It can be inferred that the number as well as quality of schools need to be improved. This needs tremendous investment from Government as setting up schools in most of the backward areas is not profitable for the private sector. The share of Government schools is coming down and in higher education, private institutions are already dominating.

It can be inferred that, government schools are now catering to the poor, owing to the middle class's preference for private schools which can be

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attributed to a variety of reasons including absenteeism of teachers, poor infrastructure etc.

Even in higher education, the number of post graduates and PhDs is very less, limiting the scope for R&D, as is clearly seen from below table:

Vocational training is the other option to accommodate the aspirants and give them an employable skill. But the number of such institutes is also highly inadequate especially in the eastern region which has some of the poorest states and which will account for much of the young population by 2022. The current status of ITIs and ITCs is given below:

Need for teachers and trainers:

The current capacity of teachers training institutes is only 1, 60, 000 which is very low compared to the the average annual requirement of 4, 15, 000 as is seen below:

The incremental requirement of teachers is 5. 8 million by 2022 and this partly with industry demand for vocational courses. The dropout from formal education is around 60% which is huge and even though it may come down to 40% by 2022, it will be still high. Hence it is the need of the hour to strengthen the vocational education and the availability of qualified teachers and trainers.

The Right to Education Act

Right of Children to free and compulsory education Act, 2009

Free & compulsory education for age 6-14

Right of transfer to other school

Duties of central, state and local governments

Responsibilities of schools and teachers

Norms and standards for a school is defined

Protection of rights of children

The Yashpal Committee Report – Reforming the Higher Education Sector

During the 19th Century education in India was not so diversified and there was scarcity of Higher Education Sector Institutions in India. As a result, the elite sections of society were attracted to foreign universities in Britain, Australia etc. Soon after Independence, many schools, colleges and universities were developed with good infrastructure and quality staff. With the passage of time multiple regulatory bodies governing the private institutions have made an entry in the Education Sector. The present education system is completely ruined and is an issue of grave attention.

This was when the Yashpal Committee submitted a report on the issue and submitted it to the HRD Ministry of India

These are few of the findings of the above report:

The committee recommended the establishment of an advisory body responsible for the comprehensive and continuous reforms in the HE sector (establishing the NCHER).

Universities were held responsibility for the academic curriculum for all the courses and programmes of study

Mandatory for all universities to have under-graduate programmes supported with the best faculty to have quality interactions and better opportunities.

It was highly recommended that specialized university with single specialisation were not created.

Vocational education sector should be subsuming under universities with accreditation to courses in industrial training etc.

NCHER should firstly recognize the top 1500 colleges across the country and upgrade them to universities.

Teacher Education should also considered under higher education.

National Commission for Higher Education and Research (NCHER) Draft Bill

The bill was passed on the establishment of National Commission for Higher Education and Research by the central government with the main objective to govern the higher education system in India, and also the other councils of the central government namely the University Grants Commission (UGC), AICTE, Distance Education Council, and other councils who deal with higher education activities.

According to the above bill, NCHER would grant authorization status to college and universities within 30 days of application, provided the universities/ colleges comply with the standards of the commission. The

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objectives and the functionalities proposed of the NCHER are described below:

It would be the functioning body for the higher education and formulate strategies for expanding the higher education sector in the prospering direction.

Its operation would be transparent and will be designed for a better governance of the standards of higher education. It will also bridge the gap between the state and central universities.

Getting connected with industry and other economic sectors for promotional activities.

It would conduct disciplinary activities in the colleges and universities in order to maintain higher quality standard and continuously create an awareness on the reforms of higher education.

2 major functions :- allocating the funds and academic direction.

Further the bill also aims at centralizing the power of the higher education sector, and undermines the autonomy authorization of the universities rather than moving to the next higher levels. Thus the questions are well addressed with regard to the efficiency of this commission with respect to the UGC.