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National Institution for Quality & Reliability

National Head Quarters

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National Institution for Quality & Reliability

NIQR came into existence in July 1987 with the amalgamation of National Institution of Quality Assurance and Indian Association of Quality and Reliability.

Vision

Be a world class professional Institution Dedicated for promotion of Excellence in Quality.

Mission

NIQR will enhance its competencies to provide strategic directions to Quality Movement and be an enabler in transforming Indian industry and Service Organisations to merge globally competitive and socially responsive.

NIQR Objectives

- ❖ To promote quality as a way of life in Indian industry and service organization.
- ❖ To propagate knowledge and awareness of quality and reliability throughout our industry and service organizations through education and training.
- ❖ To help industry achieve production of goods of quality at low costs in order to make Indian industry internationally competitive.
- ❖ To assist organizations in service sector such as banks, transport, communications, utilities etc., and academic institutions in enhancing customer satisfaction.

Member Benefits

- ❖ Free Invitations to Lectures and Presentations
- ❖ Top quality seminars, conferences and training programmes at concessional rates
- ❖ Annual Family get-to-gather
- ❖ Training consultations and organizing customized in-house modules form member – organizations at special rates.
- ❖ Free circulation of NIQR News Letter containing useful articles and case studies
- ❖ Members and others with outstanding contribution to Quality and Reliability are awarded “ NIQR Fellowship ” for which detailed criteria are being worked out and the same shall appear in this web page.



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From Editor's desk



NIQR's changing land scape

Institutions also have ups and downs like an individual's life. The INSTITUTION OF INSPECTION ENGINEERS INDIA (IIEI) was born in late nineteen sixties. The child was nurtured well by Mr. TVN KIDA and his companions. During the teenage the name was changed to NATIONAL INSTITUTION FOR QUALITY ASSURANCE (NIQA) as the scope was extended beyond manufacturing engineering. At one stage the institution was sinking badly. Mr. S. Nagarajan and his companions have stepped in and given a new life to the institution and set procedures to change the office bearers periodically.

In the adult stage of the Institution there was a major change with an ambitious plan to involve the captains of industries rather than professional members. NIQA and IAQR were merged and NIQR was born in 1987. There was hardly any activity in the Chennai Branch for quite some time as individual annual members were not accepted. The National Council could not get enough organisation members as planned. The overall Institution was reaching a dormant stage. The initiative taken by Prof. C. Y. Krishnamuthy has given full life to Chennai Branch. The Branch progressed well. That has helped the National Council to come out from bankruptcy at a latter stage. This shows that change is inevitable and improvement is required continuously. Realising this in the recent past NIQR has inducted new blood in the National Council as well as in Branch Committees. This change is going to take NIQR to a newer high as the new blood is from younger generation and they are quite active. Involving the younger generation in quality activities by adding more and more student chapters is going to be beneficial to NIQR as well as the society at large.

Quality Council of India has recognised NIQR as a nodal agent for its activities in southern India.

Most of the articles in this issue are from educational institutions and the authors are youngsters. The articles are on education system, employability and skill development. The photographs will give an idea of the successful National Convention. Sharing of case studies by the members through NIQR Journal will benefit the society. NIQR pay homage to the founder member of this institution, Mr. Arun Chowdhury and Dr. Yoji Akao, leader in QFD.

NIQR wishes all the members a prosperous and progressive 2017.

- A. Krishna Swami

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MESSAGE FROM THE NATIONAL PRESIDENT, NIQR



A Quality revolution is happening across all the sectors in India. While manufacturing industry is taking long strides to improve quality, service sector has also started taking serious actions in this direction. National Accreditation Board for Hospitals & health care providers(NABH) driving Quality improvement activities in health care, the IT sector driving a matured“Quality Excellence” through the “Delivery Excellence” approach, banking & Finance sector adopting the Quality Circle Activities etc. are good examples illustrating quality movement in the country.

Our recent National Convention with theme “Skill India for Sustainable Global Quality”, attended by about 400 delegates, successfully provided a platform for interactions between the speakers and delegates to bring an alignment between the Government's initiatives under Skill India & Make in India movements and NIQR's Vision. It was a moment of pride & honour for all the NIQRians to receive message from Prime Minister as well as the Minister of State, Skill Development & Entrepreneurship (Independent Charge) & Parliamentary Affairs, Government of India, for the successful conduct of the Convention.

Our efforts for promoting quality among students is giving good results. An overwhelming participation by 93 students from our 12 Student Chapters for T.S. Krishna Student Award for “Best Paper Presentation is self-explanatory.

We have got very useful inputs from the convention sessions - Beyond Customer Expectations, Leadership in Innovation, Operational Excellence, World Class Value Chain, Performance for Success, Enhancing Competency and Building Responsive Society. Our team will carefully consider some of the key take a ways as a part of our further actions being planned.

We had joined hands with the Quality Council of India as ZED cell to promote the "Zero Effect Zero Defect" campaign under Make in India program targeting MSME & SME's. We are now getting geared up to get fully involved in this activity through a well structured approach. Cluster activity is already in good progress.

Keeping pace with Industry 4.0, our team has already initiated actions. An ambitious program will be soon launched by NIQR to support manufacturing as well as service sector.

I am sure that with usual zeal to excel, our institution will spread wings globally.

Warm regards

Pradeep Kumar Aggarwal
National President - NIQR



MESSAGE FROM THE NATIONAL SECRETARY, NIQR



Dear NIQR Friends,

I am much delighted to communicate with you all during the World Quality month. And my memory goes back with Ashok Leyland the Proud winner of Deming Award recently, my heart and soul there for 35 years plus, and NIQR are working together to promote Quality. NIQR Congratulates Ashok Leyland.

Equally I am thankful to NIQR for the faith reposed on me by all of you to contribute as National Secretary. The month November is World Quality Month provides a platform for acknowledging the efforts and accomplishments of quality and all who work to make it happen.

The purpose of World Quality Month is to promote the use of quality tools in businesses and communities. Quality tools, such as flowcharts and checklists, reduce mistakes and help produce superior products. Quality principles could reduce headline-making errors, like Product safety, Product recalls, and financial disruptions. World Quality Month calls on people who use quality tools to share their knowledge by submitting their stories to illustrate the value of quality principles.

Remember India our great country is full of organizations dedicated to Quality. This is our month to share our passion for quality with our colleagues and other business professionals and students Pan India. It is a time to praise all that has been accomplished so far and dream about what greatness the future may hold.

NIQR is also working on these during this Quality month, like Six Sigma competitions, training for industry people. Also Training people to Next Orbit Industry 4.0

We are greying fast in 2016 and preparing to be younger for 2017.
Happy New year 2017.

With Regards

K. Sridharan Balaji
National Secretary - NIQR



SKILL INDIA FOR GLOBAL SUSTAINABLE QUALITY

Mr. MURALIKRISHNAN .H

Meenakshi Sundararajan Engineering College.

Quality, as it is defined is the best way of delivering a product or service to the benefactor. Sustainability as an important concern of quality occurs when there is a need for consistent business relationship between the client and customer. In the modern day usage, they often go together. Sustainability could be of any form: ecological, economical, social or even organisational. Skill improvement and improved results can accelerate the growth of the nation in the right direction.

India's Take on Quality Management

Working towards a global motive taking into consideration of sustainability and quality is a big job for India. This is because, quality management has always be a luxury among the indigenised manufacturing units here. Many of companies still hold a quality department namesake. We consider that a quality check procedure is a waste in money and time.

The attitude among people is to improve the quantity over the quality. The encouragement and the enthusiasm shown toward the cost saving in the product is not the same as that in the quality. We fail to understand that a quality product has a longer life than replacing a cheaper (lower quality) product. With the large number of MNCs setup in the country and their importance towards the **Total Quality Management**, the trend is on the decline, although not the desired rate.

Skill India

Skill enhancement has been the pillars of the support and growth for the development of employability and industrial growth. The government of India has been supporting this kind of framework through the **Skill Development Policy** norms. The objectives of **National Skill Development Corporation** are:

1. Upgrade skills to international standards through significant industry involvement and develop necessary frameworks for standards, curriculum and quality assurance
2. Enhance, support and coordinate private sector initiatives for skill development through appropriate Public-Private Partnership (PPP) models; strive for significant operational and financial involvement from the private sector
3. Play the role of a "market-maker" by bringing financing, particularly in sectors where market mechanisms are ineffective or missing.
4. Prioritize initiatives that can have a multiplier or catalytic effect as opposed to one-off impact.

Although this helps the industrial sector, this type of practice does not

provide any scope for growth that too globally. To outrun other nations, we should come up with the innovative technologies, test and successfully implement which is economical as well as sustainable.

Skill India for Global Sustainable Quality Various Methods

1. Training over the simulators and emulators – Only when the full controls and the extremities are known can a machine be operated successfully. Simulators help in better understanding of the working and the concept behind. We cannot afford to overexert a machine to explain the mitigation steps in the case and that of failure, which can easily be made in a simulator.
2. Imparting complete knowledge on the machine first to last that would help in the act of emergency
3. Build miniature models – Trainee should be encouraged to build miniature models with their own innovation that would result in better functioning.
4. Constant refresh or updates on the devices to incorporate the latest trends in the technology should be provided to the trainee.
5. A connection between theoretical degree education and practical onsite working has to be established.

Various Methodologies

1. Follow The Leader Goat Approach:

It is important to mention the methodology that has to be stopped

before the ones that could be followed. It is said that India got independence in 1947. But still we practice whatever they have left to us. If British go left, we also go left. If they supply at 220V, we copy the same. This follows in many aspects - Russian Collaboration, German Collaboration, US Collaboration. With the foreign collaboration & machinery, we always trail behind them. Remaining at position 2,10, 34 is not what is desired.

Initially as we put out all these, we may downgrade. Still we always have infinite opportunities to improve, advance, and outset all international products with standards and quality. Such a product would be more customized to the country and its neighbours. Thus, to skill up & portray the skills, it is essential to develop indigenised machinery.

II. Integrated Approach

Quality is not all about getting ISO or other standards certificate. They are many ways to obtain this. But the point is **Attaining Perfection** in the product manufactured or the service rendered. It is the overall sustainable use of resources that is concerned without losing hold on the service quality. In this context, the overall procedure has to be redefined:

- i. **Raw Material Identification** is itself a skill that has to be propagated to the country's industrial sector. It is necessary that these materials should properly qualify all the standards. By cheap(poor

quality) raw materials with a so-called certificate has in many cases spoiled the reputation of many firms over the years.

- ii. **Processing** must involve a strict and regulated procedure. It is in this part that maximum concentration has persistently been provided. Equally important is to maintain the processing equipments. Frequent maintenance, continuous checks such as voltage deviation performance, device operating range, cooling levels, etc. are necessary so that the device is in a perfect condition at all the times.

- iii. **Testing** marks the performance evaluation of the manufactured product. All products must satisfy not alone the utility it is desired but should also perfectly match the specifications of the customer. Quality check or Revaluation involves an important management concept:

Six Sigma

- Eliminate waste, rework and mistakes
- Advantageous use of human resource and process power
- Statistical Target of 3.4 defects per million opportunities

At this point, it is important to break the misconception that automated machine are more advantageous than human-made as they are error free. Automated machines might make mistake at any time and special personnel and machinery are definitely required to

separate out the defective ones which is preferably taken back and corrected or recycled than throwing it away. In contrast, the example of ROLLS ROYCE explains the quality and the perfection in a hand-made product.

III. Negative What-if Approach

Although it is encouraged to have a positive attitude, it is always said that the negativism helps to improve and be cautious and in the same way be useful in emphasising the desired leap in quality. This can better be understood by an example:

An automobile is a very useful thing. It helps to cover long distance. It is equally dangerous.

- i. What if the vehicle is operated speed- Install a speedometer so that the driver is aware of the speed he travels at.
- ii. What if the driver does not mind the speed- Install a speed governor so that the vehicle is prevented from rising beyond a particular speed.
- iii. What if the speed governors fail – Install safety devices like SEAT BELTS, AIR BAGS, etc.
- iv. What if the driver does not wear the seat belt – Install a mechanism that allows the vehicles to start only after wearing the seat belt
- v. What if the vehicle starts skidding – Provide Anti-Braking System in the vehicle
- vi. What if the driver doesn't know to change gears appropriately – Develop Automatic Gear change in Vehicles.

vii. What if there is no drivers –
Research on ***Automatically
Plying Cars***

This is how an automatically has evolved from a four wheeled traverse machine to an intelligent super functioning human supporting pleasure.

IV. Utility Based Approach

Although a general idea is essential, there are certain application specific issue that has to be addressed. These involves specific concerns that has to be looked at while aims for sustainable quality. Each industry has its own problems and failures. Nothing is 100% waste free. The manufacturing requires this but it is only a small portion of what it is recycled or reused. A relatively less considered issue is silicon pollution or else the electronic pollution.

Silicon is nothing but a pure component of sand. It has led to severe impacts in all industries. With its entry into electronics, diodes, transistors, chips and controllers have been manufactured with both industrial and consumer purposes. But just like plastic, silicon is not degradable. It cannot be converted back to sand. With the amount of the electronic waste increasing year by year, it would slowly rise to be a menace.

In order to efficiently recycle a silicon scrap obtained by cutting a silicon chunk as a raw material silicon for solar batteries, a silicon recycling method of the present invention, according to one aspect, includes the steps of melting a silicon scrap by heating, and immersing a crystallization substrate in molten silicon and depositing silicon on a surface of the

crystallization substrate. The step of separating silicon on the surface of the crystallization substrate from the crystallization substrate is preferably included. In addition, a silicon ingot obtained by melting the silicon raw material for solar batteries in a mold and solidifying the same is suitable as the silicon chunk.

Moving to other materials is an alternative. Use of germanium or metal oxides could be done but they too have their own limitations. There is still no perfect method that takes off all the pollution, side effects, bad outcomes of all the industry. The skill development in such lines is the need for the hour. Environment and biology of it is undoubtedly affected by human deeds, inventions and their cruel effects.

The approaches so far seen are not mutual exclusive. They have been segregated for the purpose of narrowing the lines of thinking. In fact a hybrid of all these necessary for a perfect management.

Conclusion

India is a country with a lot of human resource that is enriched with youth who could be sufficiently tapped to obtain the maximum efficiency. The better the understanding in a subject, the great the interest to research in the field. The more the research, the greater is the indigenisation. Practical onsite training and their relevance with the theoretical knowledge are very essential to instil indepth skill that aims to proceed towards global sustainable quality.





SKILL INDIA FOR SUSTAINABLE GLOBAL QUALITY

Ms. R. Deepa

First year Meenakshi Sunderarajan Engineering College.



What is Skill India?

Skill India is an initiative of the Government of India. It was launched by Prime Minister Narendra Modi on 16 July 2015 with an aim to train over 40 crore people in India in different skills by 2022. The initiatives include National Skill Development Mission, National Policy for Skill Development and Entrepreneurship 2015, Pradhan Mantri Kaushal Vikas Yojana (PMKVY) scheme and the Skill Loan scheme.

UK will be contributing to this program. Virtual partnerships will be initiated at the school level to enable young people of either country to experience the school system of the other country and develop an understanding of the culture, traditions and social and family systems. A commitment to achieve mutual recognition of UK and Indian qualifications was made. Oracle on 12 February 2016 announced that it will build a new 2.8 million sq. ft. campus in Bengaluru will be Oracle's largest

outside of its headquarters in Redwood Shores, California. Oracle Academy will launch an initiative to train more than half-a-million students each year to develop computer science skills by expanding its partnerships to 2,700 institutions in India from 1,700 at present.

Need for Skill India

Skill development is one of the essential ingredients for India's future economic growth as the country transforms into a diversified and internationally-competitive economy. Skill development is going to be the defining element in India's growth story. For there to be global quality, there needs to be a trained and able workforce. India has immense manpower, but it needs to be harvested. For the quality to sustain, the future employees and workers, which comprise the student strength, need to be trained to face the changing work scenario.

Challenges And Ways Forward

Demand & Supply Mismatch :

The number of people formally trained in a year is only 1,100,000 by Ministry of Labour and Employment and approximately 3,200,000 trained by 17 other central government ministries. According to the Manpower Group (USA), in Germany, USA, France, and Japan, the percentage of employers who find it difficult to fill jobs is 40%, 57%, 20% and 80% respectively as compared to Indian employers (67%).

Way forward: Thus an ideal scenario is one in which supply of labour can be transformed into skilled workforce which is easily absorbed by the industrial-sectors. However, in India, only a small portion of labour force is actually undergoing for formal training. It has been observed that there are more people than the available jobs at the low skills level, while there are more jobs at the high skills level than those available for such jobs. Therefore, in order to create a people-centric approach for skill development, it is required that the skill development initiatives needs to be coordinated with demand and supply scenarios across geographies, industries and labour markets so that new skills required by industry or changes in supply of labour are speedily adjusted with adequate and efficient training programs.

Geographical Problem :

The states with much higher economic growth rates have more new jobs with lower rate of labour-force while the states with slower economic growth rates have higher population growth rates with fewer new jobs. Majority of formal institutions are also located

mainly in urban areas as compared to rural areas and even private sector institutions are also reluctant to operate in rural areas. Hence, large proportions of rural population do not have any formal vocational training institutions.

Districts notified as backward have serious paucity of formal skill training as majority of skill development institutions in these locations emphasized only on basic livelihood skills generally provided by NGOs or other agencies as a part of social development programs. These types of skills are often not formally assessed and as a result, are not recognized for employment by industrial sectors.

Way forward: In order to combat the problem of large geographical and socio-economic conditions of the economy, the Government along with its partner agencies should set-up more standardized skill-based institutions or skill development centers across the country, particularly in laggard/backward states with a view to provide equal access to all segments and sections of the society, so that the whole society gets the benefits of the skill initiatives and strategies.

Low Educational Attainment :

There are about 1.5 million schools in India with a total enrolment of 250 million students (from pre-primary to high/senior secondary levels) i.e. schools constitute the maximum number of enrolments. Higher education sector comprises around 20.7 million. The total number of students enrolling for open universities and other diploma courses constitute 24.3% of the total students. Vocational training in

India is primarily imparted through the government and private industrial training institutes (ITIs).

But the reality is that some regions are still lags behind as compared to other regions in terms of accessibility of education and skills in India. Current annual training capacity of India is 4.3 million, which is 20% less than the industrial requirement of 22 million skilled workers a year. There are higher drop-out rates of educational institutions mostly after the age of 15 years and above and especially in female students. The quality of education is poor, which results in lack of literacy and numeracy skills on the part of students. Also, many skills taught in curriculum are obsolete and workers are unable to find jobs according to their aspirations. Inflexibility in curriculum framework of vocational training and education make it difficult for the individual to imbibe the proper skills.

Way forward: The need of the hour is to provide quality educational curriculum at all levels with targeted skills development programmes. The instructional material or syllabus must be prepared jointly by the industry and the educational planners. It should be regularly updated and must include more of practical learning than theoretical. So that students should imbibe the necessary job skills as demanded by the industrial sectors.

Vocational Training :

India is progressively moving towards knowledge economy, where skills are widely recognized as the important lever of economic growth, but the perception about vocational education is still

doubtful i.e. it is generally meant for those who fail to get admission in the formal system. Thus, it still need time to be considered as a viable alternative to formal education. It was observed that around 90% of the jobs are skill-based i.e. they require some sort of vocational training whereas in reality only 2% of the population (in 15-25 years age group) enrolled for vocational training in India.

Way forward: A scalable, efficient and comprehensive vocational training system with proper awareness generation programs is the need of the hour. As these programs help in spreading information about existing skill development courses and market requirements which lead to increase the student enrolment as well as enhance the credibility of vocational institutes. As education and vocational training are the important contributors to overall skill capital pool of an economy. Education provides a base in the form of ability in literacy, numeracy and cognitive abilities and vocational training equips an individual with specific skills. Vocational training is practical/manual in nature in contrast to education which is purely theoretical in nature. Thus linkages of both serve simultaneously the hand and the mind, the practical and the abstract aspects.

Private sector participation :

The private sector is not involved adequately in curriculum development and policy formulation related to educational and vocational training. Most private sector institutes are located in urban areas. Rural population lags behind. Furthermore, due to high cost of these institutes, the weaker or disadvantaged section is also unable to get proper skill training.

Way forward: A strong policy measures and operational linkages are needed to bring together the public and private sector to improve the quality and relevance of training.

Placement-linked Challenge :

A major problem of India's existing skill (or education) development system is lack of linkages between education and placement of that trained workforce. In India, the vocational training is offered nearly in 120 courses and mostly of long duration (i.e. of 1 to 2 years duration). The micro, small and medium enterprises (MSME) find it difficult to invest in skill development institutions and this result in deployment of semi-skilled workforce in many MSME firms

Way forward: In this era of knowledge, highly skilled workers who are flexible and analytical in nature are recognized as the driving force for innovation and growth. To achieve this India needs a flexible education system with multi-faceted and highly efficient skill development system. This system must provide linkages between each of its constituents and provide a seamless integration between skill development and employment.

Multiplicity of Institutional Framework:

Over the past few decades, India has witnessed significant progress in the skill development landscape as various types of organizations have been set up both at national and at state level. Around 17 ministries, 2 national-level agencies, several sector skill councils, 35 state skill development missions and several trade and industry bodies comes forward with a view to push the national

skill development agenda. Given this mind-bogglingly complex institutional setup with overlapping and conflicting priorities and little co-ordination and standardization ultimately resulted in fragmented outcomes with limited impact.

Way forward: It is necessary to introduce integrated reforms in the form of establishing some nodal authority or bodies ranging from advisory to executive in nature with a view to coordinate and governs various skills development and policy making initiatives.

Informal & Formal Sector Skill-Gap:

The Government of India has set a target to impart the necessary skills to 500 million people by 2022 in the Twelfth Five Year Plan, whereas in reality, the country is facing a significant skilled manpower challenge over the next decade. Around 12 million people are expected to join the workforce every year whereas the current total training capacity of the country is around 4.3 million, thereby depriving around 64% entrants of the opportunity of formal skill development every year. Furthermore, out of approximately 0.4 million engineering students graduating every year in India, only 20% are readily employable. Around 93% of the Indian workforce is employed in the unorganized or informal sector, which lacks any kind of formal skill development training and barely 2.5% of the unorganized workforce reportedly undergoes formal skill development.

Way forward: The dire need of the hour is to focus more on the labour force of the unorganized sector. The

unorganized sector cannot afford to hire expensive labour of high quality despite needing it. This conflicting objective can be resolved with an integrated approach that gradually enhances labour quality while maintaining a purposeful balance with the demand and affordability of labour markets

Infrastructure Challenge:

One of the important requirements for the proper implementation of the skill and training development programs is the availability of the basic infrastructure for the same. It has been noticed that many skill development institutions lack proper infrastructure. The situation is more severe in case of institutions located in semi-urban and rural areas. Hard infrastructure including equipments, machines and tools etc. are not available in majority of the institutions. As a result, workers get trained on outdated machines and find themselves deficient in skills when employed. Further, the lack of industry linkages which would otherwise provide some help in addressing several infrastructure-related challenges including trainers, machines etc. also woefully inadequate.

Way forward: The policy-makers must focus on providing the required infrastructure and equipments namely computers, software's, tools, machines etc. and qualified instructors so that they provide high-quality skills as required by industrial sectors and relevant practical exposure to the students. Secondly, appraisal of institutes against standard norms and guidelines need to be conducted regularly and ratings should be based on outcomes assigned to every institution.

Training of Trainers :

Training trainers is one of the keys to skill development framework. And absence or inefficiency of the same would result in serious bottleneck in the implementation of skill development projects. In India, the gross requirement of trainers is approximately 79,000. Furthermore, the annual incremental requirement of trainers is approximately 20,000, whereas at present the current annual capacity of the trainers is only 2,000. It is estimated that various publicly funded organizations produce 3.5 million trained personnel per annum against the 12.8 million new entrants into the workforce each year.

Way forward: The Government and its participating agencies should focus on the provision of more effective training centres for the trainers. Their level of competence should be measured in terms of their theoretical knowledge, technical and pedagogical skills as well as being abreast with new technologies in the workplace. Otherwise, this mismatch between demand and supply of trainers could impede the success rate of the whole skill and training framework.

Conclusion :

To make India internationally competitive and to boost its economic growth further, a skilled workforce is essential. As India moves towards the Knowledge economy, it becomes increasingly important for it to focus on advancement of the skills and these skills have to be relevant to the emerging economic environment. For transforming its demographic dividend, an efficient skill development system is the need of the hour.





SKILL INDIA FOR SUSTAINABLE GLOBAL QUALITY

Ms. Rajakumari S

Sri Sai Ram Engineering College

Abstract :

India has gradually evolved as a knowledge-based economy due to the abundance of capable, flexible and qualified human capital. However, there is a need to further develop and empower the human capital to ensure the country's global competitiveness.

Introduction :

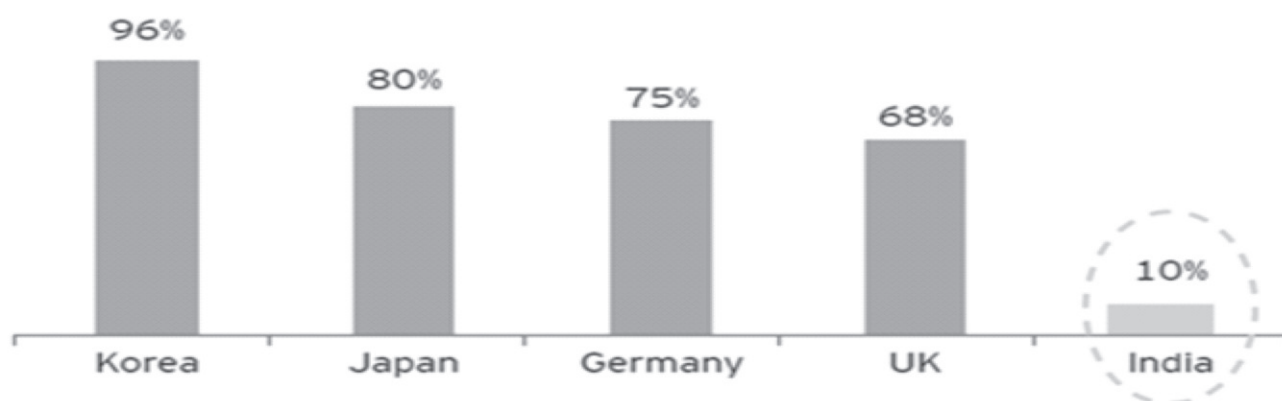
Despite the emphatic stress laid on education and training in this country, there is still a shortage of skilled manpower to address the mounting needs and demands of the economy. As an immediate necessity that has urgently arisen from the current scenario, the government is dedicatedly striving to initiate and achieve formal/informal skill development of the working population via education/vocational education/skill training and other upcoming learning methods.

Skill Improvement Indicates :

The skill development of the working population is a priority for the government. This is evident by the exceptional progress. India has witnessed under the National Policy on Skills (2009) over the years.

The objective of the policy is to expand on outreach, equity and access of education and training, which it has aimed to fulfill by establishing several industrial training institutes (ITIs), vocational schools, technical schools, polytechnics and professional colleges to facilitate adult learning, apprenticeships, sector-specific skill development, e-learning, training for self employment and other forms of training.

The government therefore provides holistic sustenance through all its initiatives in the form of necessary financial support, infrastructure support and policy support.



Demographic Dividend :

As compared to western economies where there is a burden of an ageing population, India has unique 20-25 years window of opportunity called the 'demographic dividend'.

This "demographic dividend" means that as compared to other large developing and developed countries, India has a higher proportion of working age population vis-à-vis its entire population.

Year	rate		
2011–12	9%		105
	7%		102
	5%		149
2016–17	9%		
	7%	232	
	5%	224	

Quality :

In the era of globalized economy, quality of training must be in line of global standards for sustaining the international competitiveness on one hand, as well as improving an individual access to decent employment on the other. 'One Nation One Standard' should be the new mantra to ensure that national standards and quality for skilling are globally aligned and Indian youth can aspire towards securing local, national and international job opportunities. There is need to enhance the quality of trainer by adopting recruiting the experienced and trained as craft persons and there must be special efforts to improve the gender balance among trainers.

Parameter For Improving Quality:

- Quality assurance framework embedded in NSQF
- Market relevant training programs
- Recognition of prior learning
- Curriculum alignment
- National certification framework
- Employability skills
- Placements

Global Partnership :

Through global partnership, e-leverage best practices from the world and enrich our domestic training programs to improve the quality of trainees and trainees. India enjoys the demographic

advantage and with the prospect of global shortage of skills as the world population ages, means that country could be supplying skills the world. As per US Census Bureau estimate, by 2022, countries like USA, UK and China will fall short of skilled labor by 17 million, 2 million and 10 million respectively while India will have surplus skilled workforce of almost 47 million in the age group of 19-59 years.

Institutions Working For Skill Development :

To improve the skills of India, three government institutions namely

- ♦ National Skill Development Agency (NSDA),
- ♦ National Skill Development Corporation (NSDC),
- ♦ Directorate General of Training (DGT),

are working with national mission of skill development to facilitate smooth functioning of the national institutional mechanism.

Skill Developing Strategies :

- ☞ Broad availability of quality education as a foundation for future training. Education for all, and children in school and not at work, is an essential foundation of future training.

- ☞ Building solid bridges between the world of work and training providers in order to match skills provision to the needs of enterprises. This is often done best at the sectoral level where the direct participation of employers and workers together with government and training providers can ensure the relevance of training.
- ☞ Continuous workplace training and lifelong learning enabling workers and enterprises to adjust to an increasingly rapid pace of change.
- ☞ Anticipating and building competencies for future needs. Sustained dialogue between employers and trainers, coordination across government institutions, labour market information, employment services and performance review are steps to an early identification of skill needs.
- ☞ Ensuring broad access to training opportunities, for women and men, and particularly for those groups facing greater difficulties, in particular youth, lower skilled workers with disabilities, rural communities.

Conclusion :

Government is committed for the skill enhancement program through 'Skill India Mission' in order to provide better quality of skill training and reduction in supply demand mismatch by 2022 to achieve the target of skilled workforce.

Success of developing the skills of India to global quality lies on three main factors:

1. Inclusion of marginalized groups.
2. Inculcating marketable skills. By marketing skills it not only means emergent domestic market but also

the high standards of global market for better contribution to national economy.

3. Creating channels for connecting market and human resource. That include building on strengths and weeding out weakness.

The channels need to be responsive which can foster tailor-made solutions for changing employment market for maximum returns. This can only happen at behest of government agencies and private players where other actors such as civil society, NGOs, independent institutes and even independent actors are connected.

Market has its own dynamic and imparted skills must cater to that. Now that market is dynamic and keeps evolving, it is important to keep pace with times, this can happen only through proper policy vision. Government of India seems to be committed in that direction and is showing its commitment through various policies and programs.

Summary :

- ♦ The essay concentrates on the real connotation of skill development and the skills which are needed to be developed in India to increase its quality to global quality.
- ♦ It explains about the demographic dividend in India and the way it can help India to increase its quality. They even put in plain words about the need for global partnership to increase the quality of India.

It even enlightens us about the institutions which are working harder to develop the skills of India in a positive manner. They even view us various strategies which are helpful for us to develop the required skills in each citizen of India.

