

Minutes of Webinar
Skilled resources, A Quandary : An Electronics Industry Perspective

Agenda

1. Current Gaps in Skills
2. Identify Solutions
3. Effect of NEP
4. Industry's Skill Demand
5. Incorporating Skilling into Curriculum
6. Advantages of Skill Mapping

Confederation of Indian MSME in ESDM and IT(CIMEI) conducted a WEBINAR on 9th Dec 2020 with a galaxy of prominent panellists namely: **Mr. Sanjeev Keskar President CIMEI, Capt. Kaustav Nath Head NSDC operations Karnataka, Goa & Tripura, Mr. Saleem Ahmed VP ESSCI, Ms. Shubha Sunil Jt. Secretary (Skill development, Compliance and IT) CIMEI, Dr. Santosh K Vishwakarma, Associate Professor IIT Indore, Mr. Srinath Rao HR Consultant. The webinar was well attended by more than 40 participants including CIMEI office bearers across country. The webinar was hosted by Mr. Jairaj Serinvas DG CIMEI**

Opening remarks by Mr. Sanjeev Keskar President CIMEI:

The electronics sector has a huge demand for skilled manpower, and currently, this industry is facing shortage of skilled manpower in the emerging sectors like IoT, Industry 4.0, Embedded Design and other new age economy skill sets. To capture this need of the industry and prepare the manpower as per the current and next-generation job roles, the Confederation of Indian MSME in ESDM and IT is looking forward to work with ESSCI and NSDC and other stakeholder in line with the advanced technologies like IoT, Embedded system & Semiconductor and EMS. The CIMEI is committed to work for the success of the government of India's flagship programme "ATMANIRBHAR BHARAT"

In his presentation **Mr. Saleem Ahmed** VP ESSCI has given an important role being played by ESSCI for the development of skills in Electronic sector.

Electronics Sector Skills Council of India (ESSCI), a Sector Skill Council formed under the Ministry of Skill Development and Entrepreneurship (MSDE) – GoI, has has trained over 7 lac candidates in over 60 ESDM job roles across the country in the last 5 years. ESSCI also plans to open many new Centres of Excellence (CoE) across India by end of 2020 to train more industry-oriented professionals. With this, India is set to become self-reliant in the electronics field. In less than three

years, ESSCI has become cost positive, not looking at Government grants with an EBITDA of INR 5.66 Crore. ESSCI also saw its revenue jumping to INR 19.82 crore (FY 2016-17).

ESSCI intends to encourage entrepreneurship and innovation in the electronics space through an extensive partnership with IESA where it is playing a pivotal role to reach over 1 lakh relevant engineering students across 500 engineering colleges spanning India in the next 5 years. It will help in giving a boost to our government's plan to advance the electronics sector manufacturing in India apart from creating jobs. The multi-pronged strategy is already in place and have 13 industry sponsored Centre of Excellences/Training Centres to train the trainers coming up. The CoEs would be the flagship centres for innovation, micro-entrepreneur development, rural technology innovation & implements, advisory, consulting and skill development in the areas of Electronics components & hardware's, Nano-Electronics, Sports and Bio-Mechanics. ESSCI also developed Qualification Packs, based on National Skill Qualification Framework (NSQF) with the collaboration of industry associations as a part of the Skill India initiative.

ESSCI have placed over 6 lakh candidates in various top companies in ESDM space and has won industry recognition as a trend-setting and innovative organization in delivering integrated skilled training solutions across India."

Smt. Shubhamangala Sunil the Cyber Security expert and Jt. Secretary CIMEI in her presentation says: Despite a steady increase in demand, India continues to witness a huge shortfall of skilled cybersecurity professionals. A lack of skilled professionals continues to haunt the country that needs about 10 million cybersecurity professionals.

In recent years, India has witnessed a sharp rise in the number of cyberattacks. The expansion of the digital ecosystem has accentuated the need for companies to hire trained cybersecurity professionals to deal with new threats. The instances of cyberattacks in India over 500% during ongoing pandemic in 2020 compared to the previous year. The instances of cyberattacks on Indian enterprises surged by 117% over 2019. However, due to insufficient funding and a crunch of skilled resources, the availability of skilled workforce does not live up to the demand in the industry. As thousands of companies look to hire cybersecurity professionals, the gap in the availability of skilled workforce has widened. Considering that India is home to several IT companies and addresses the technology requirements of several global companies, this shortage of skilled cybersecurity workforce can be devastating in the long term. Thus, there is an immediate need to rethink the strategy and address the mismatch in the demand and supply of cybersecurity professionals.

Training and funding are key challenges

Lack of funding continues to impact the supply of skilled professionals in India's cybersecurity space. Corporate businesses are not making enough investments in cybersecurity training partly because they believe trained professionals will leave for better job prospects. Instead of training employees in cybersecurity, they prefer to hire experienced candidates with necessary skills and expertise.

The dearth of educational institutions that impart cybersecurity training is also a key factor responsible for the shortage of skilled professionals in the country. Currently, a few institutes have entered into income-sharing agreements to train professionals on emerging technologies in cybersecurity. However, in the absence of sufficient institutes and training programs, companies have found it increasingly difficult to recruit the right talent. Also, candidates with formal degrees may not be equipped with key skills required to deal with cybersecurity incidents in a real-world scenario. Hence, the need for companies to find and hire suitable professionals remains a key concern.

Government funding is a step in the right direction

The government has taken several initiatives to reduce the supply demand mismatch in the industry. In the Union Budget 2020, the government announced allocation of 8,000 crore for the National Mission on Quantum Technologies and Applications that would drive the growth of the country's cybersecurity sector. In addition, the government's plan to set up 150 higher education institutes can provide the much-needed fillip to the creation of a world-class infrastructure in the country for cybersecurity training.

The government has set aside 3,000 crores for skill development. Thus, the government should integrate simulation technologies such as Cyber Range to help build cybersecurity capabilities and provide better job opportunities.

Opportunities unlimited

The rising incidents of cyberattacks along with data protection and privacy laws are estimated to lead to huge revenue opportunity and job opportunities for 10 million of Indian professionals by the year 2025. Cybersecurity would account for about 10% of the revenue generated by India's IT sector in the same year.

In the absence of many formal institutes that provide cybersecurity training, specialized programs can provide a hands-on approach to prevent and deal with attacks.

Capt. Kaustav Nath State Engagement Officer National Skill Development Corporation Karnataka, Goa & Tripura clarified certain issues raised by ESSCI and **Smt. Shubha. NSDC** is working along-with ESSCI for the development of Skills and they are well coordinated with each other's mission. However, with regards to skill people in the space of cyber security he mentioned that NSDC is closely working IT-ITeS Sector Skills Council with NASSCOM.

Basically, NSDC's role is to promote private sector participation in skill development. Private sector cooperation is necessary for nationwide promotion of skill development as private sector has funds, trainers and institutions besides offering large variety of jobs to the workforce.

Hence the NSDC has an organization structure of a PPP entity. NSDC funds several skill development initiatives, SSCs and other activities including the setting up of

large number of vocational institutions in the country. Here, the Corporation is encouraging private sector players to provide low-cost training. The NSDC has been operating through partnerships with other stakeholders in skill formation and thereby creating a skilling ecosystem viz. It partners with the private sector players, Central Ministries, State Governments, universities and schools etc. NSDC is working with 21 universities for aligning education and training to National Skill Qualification Framework (NSQF).

NSDC gives funds to assist partner entities for enhancing the employability of work force. Funds are provided in the form of soft loans, equity and grants, or even a combination of one or more instruments.

Dr. Santosh Kumar Vishwakarma is with Discipline of Electrical Engineering, Indian Institute of Technology Indore, MP, India as an Associate Professor and Dean Student Affairs at IIT Indore. He is engaged with teaching and research in the area of Devices, Circuit & System Design shared his experience in developing skills in Electronic manufacturing and the importance of it. IIT Indore has been engaged with various industry in the mission. In his opinion, there is a need to train, ITI Diploma holder and undergraduates and even the school drop-outs. Because IIT graduates can take up high end assignments but they can work only if they have skilled support staff.

Srinath Rao, OSR Consultants feels Skilled resources are the backbone of any industry & electronics industry is no exception.

The electronics industry, given its lesser product lifecycle & frequent technology changes is extremely challenged to have its resources skilled up to meet the requirements.

Current Situation –

We have an education model where we churn out students from ITI, Diploma & Degree colleges (institutions) in various streams / skills. There is also a dedicated stream for electronics. The quandary is that most electronics engineering graduates don't even look upto electronics industry as an option. The cream from the electronics industry prefers to move into IT. This leaves the industry to pick from the remaining lot who too are not passionate to get into the electronics industry to make their career. Here, one can't blame the education system alone as industry too has a role to play to make the industry attractive for the graduates however, we will keep the latter part for some other day.

- An electronics Engg. graduate or diploma doesn't get to see a SMT machine, reflow oven or an AOI machine during their curriculum which their mechanical cousins do. This is where the problem starts. Now if a person doesn't even know what happens in the electronics industry & how the production takes place, how is he even going to be passionate about it?
- The other quandary is that the industry hires as per their departments while the education system churns out people sector wise. This mismatch in demand vs supply must be addressed quickly & that is where the education system needs an overhaul or at least a dramatic change.

The above two factors force industry is a biggest hurdle while recruiting freshers because it costs time & money to train the freshers in the areas that the organization. As a result of this, industry is forced to hire experienced folks into their organizations which obviously spikes the cost.

This is precisely where we get to hear reports that India has only 10-15% employable & so on.

Solution -

- Changes in the education system -
- Get inputs from industry on the curriculum
- This curriculum must include all aspects of the sector.
- Incorporating the current Skilling content into the curriculum -
- If the govt believes the content of the current skilling up program is the way forward, then why not incorporate it into the curriculum itself?

Advantages

- These changes can significantly improve the employability of our youth.
- Industry can then look to hire freshers into their team without any additional cost on training, and our product costs will come down drastically.
- Product quality will improve significantly
- Experienced resources can then be deployed for more innovative & higher returns activities.
- It will make us a more cost competitive & a high quality product, boost our chances for more exports & more business coming into the country.

I thank every panellist for making their point for the benefit of audience present.

Jairaj Srinivas
Director General
Confederation of Indian MSME in ESDM & IT
Mobile: +919886897830