

GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT AND ENTREPRENEURSHIP
RAJYA SABHA
STARRED QUESTION NO. 98
ANSWERED ON 31.07.2024

TRAINING PROGRAMME FOR EMERGING TECHNOLOGIES

98. SHRI AYODHYA RAMI REDDY ALLA:

Will the Minister of SKILL DEVELOPMENT AND ENTREPRENEURSHIP be pleased to state

- (a) the strategy to develop skill training programs for emerging technologies like AI, blockchain and cybersecurity, and in what manner they will be integrated into existing vocational training frameworks;
- (b) the steps taken to ensure that skill development programs for emerging technologies are industry-led and aligned with industry requirements; and
- (c) the details of investments being made in developing trainer and instructor capacity for emerging technologies, and what is the target for trainer development?

ANSWER

THE MINISTER OF STATE (INDEPENDENT CHARGE) IN THE MINISTRY OF SKILL DEVELOPMENT AND ENTREPRENEURSHIP

(SHRI JAYANT CHAUDHARY)

(a) to (c) A Statement is laid on the table of the House.

**STATEMENT REFERRED TO IN REPLY TO PARTS (A) TO (C) OF RAJYA SABHA
STARRED QUESTION NO. 98 ANSWERED ON 31.07.2024 REGARDING 'TRAINING
PROGRAMME FOR EMERGING TECHNOLOGIES'**

(a) to (b) Under the Govt. of India's Skill India Mission (SIM), the Ministry of Skill Development and Entrepreneurships (MSDE) delivers skill, re-skill and up-skill training through an extensive network of skill development centres/institutes, etc. under various schemes, viz. Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Jan Shikshan Sansthan (JSS), National Apprenticeship Promotion Scheme (NAPS) and Craftsman Training Scheme (CTS) through Industrial Training Institute (ITIs), to all the sections of the society across the country. The SIM aims at enabling youth of India to get future ready and industry ready skills.

In order to promote skilling in emerging technologies and integrate them with the existing vocational training framework, IT-ITeS Sector Skill Council has developed 54 NSQF (National Skills Qualification Framework) aligned job roles in areas like Artificial Intelligence, Big Data Analytics, Internet of Things, Cloud Computing, Robotic Process Automation, Block Chain and Augmented Reality & Virtual Reality. Also, Directorate General of Training (DGT) under MSDE has signed Memorandum of Understanding (MoU) with big companies like IBM, CISCO, Quest Alliance, and Microsoft for short term training courses in new age technologies including Artificial Intelligence (AI). Course content of these programs are available online on BharatSkills portal.

In order to re-skill and up-skill IT-professionals to be adept with the emerging technologies like AI, Blockchain and Cybersecurity, etc., the IT-ITeS Sector Skill Council Nasscom in partnership with Ministry of Electronics and Information Technology (MeitY) has launched Future Skills Prime (FSP) platform. The National Education Policy (NEP) 2020 has recommended introducing contemporary subjects like Artificial Intelligence in curriculum, at relevant stages. Central Board of Secondary Education (CBSE) has introduced Artificial Intelligence as a subject in class IX from session 2019-2020 and in Class-XI from session 2020-2021 in their affiliated schools.

To ensure that skill development programs for emerging technology are industry-led and aligned with industry requirements for employment and thereby enhancement of labour productivity, following steps have been taken by Ministry of Skill Development and Entrepreneurship (MSDE):

- i. The training programmes offered under the schemes of MSDE are developed in collaboration with industries, keeping in view market demands. The IT-ITeS SSC Nasscom led by industry leaders have been set up by National Skill Development Corporation (NSDC) which are mandated to identify the skill development needs of respective sectors as well as to determine skill competency standards.
- ii. Future ready job-roles addressing the requirement of Industry 4.0, emerging sectors like Drone, Artificial Intelligence (AI), Robotics, Mechatronics, etc., have been prioritized under PMKVY 4.0. Also, new age courses have been developed to meet the demand of futuristic job roles in emerging technologies under Craftsman Training Scheme (CTS).
- iii. The National Council for Vocational Education and Training (NCVET) has been set up as an overarching regulator establishing regulations and standards to ensure quality in the Technical and Vocational Education and Training (TVET) space.
- iv. The Awarding Bodies recognised by NCVET are expected to develop the qualifications as per the industry demand and map them with the identified occupations as per the National Classification of Occupation, 2015 of Ministry of Labour and Employment and obtain industry validations.

- v. Directorate General of Training (DGT) is implementing Flexi MoU Scheme and Dual System of Training (DST). These initiatives are meant to provide training to ITI students in industrial environment.
- vi. Courses aligned to National Skills Qualification Framework (NSQF) also have components of On Job Training (OJT) and employability skills.
- vii. NSDC, under the Market led program, provides support to training providers that collaborate and align skill courses with industry demand.
- viii. Under NAPS, apprenticeship training and increasing engagement with industrial establishments for undertaking apprenticeship programmes is promoted.
- ix. Government of India has signed Migration and Mobility Agreement with ten countries viz., U.K., France, Germany, Israel, Taiwan, Austria, Mauritius, Australia, Portugal and Finland for aligning skilling with demand in these countries.
- x. Government of India has announced setting up of 30 Skill India International Centers for catering to the demand for skilled workers for foreign countries.

(c) The Ministry has made substantial efforts to develop trainer and instructor capacity in emerging technologies and has collaborated with industry experts and academic institutions to design comprehensive Training of Trainers (ToT) program. National Council for Vocational Education and Training (NCVET) has notified structured ‘Guidelines for Training of Trainers (ToT)’ defining parameters in terms of eligibility, design, duration, implementation mechanism progression and monitoring. For training of trainers, 33 National Skill Training Institutes have been set up across different States, which implement Craft Instructor Training Scheme (CITS). In addition, 121 (110 State Government and 11 private) Institutes for Training of Trainers (IToTs) have been set up by State Government and private sector.

For the short-term skilling, trainers are required to have a domain related educational qualification and professional experience. Continuous and upscaled ToT programs are mandated across schemes, which are conducted by eminent establishments with expertise in the fields including National Skill Training Institutes (NSTIs), Centres of Excellence (CoEs), Sector Skill Councils (SSCs), Skill Universities and Institutions from other Central Ministries/Departments and State Governments. Institutions of eminence, like IITs, are also involved in imparting training in emerging technologies to trainers with hands-on training through their qualified faculty members.

Training of trainers is demand-driven and aligned to the requirements of trainers for various skilling programmes. Under CITS, 44219 trainees have been trained in NSTIs and IToTs (Government & Private) during the last five years up to 2022-23.
