Roadmap

Contents

Targeted Skilling Action Plan for Tamil Nadu

Education Level	Action Points
Secondary and Higher Secondary School	**Career Counselling and Exposure to World of Work** 1. Annual Regional SCORE (Skills & Career Oppurtunities Recognition and Exposures) Camp , a 2-days industries?-led students career counselling and aptitude-based alignments assessment fare for Secondary and Higher Secondary School Students 2. Weekly systematic Career Counselling at Schools either by an appropriately trained Teacher OR through a specialised agency (community organisation or a non-government organisation) 3. Periodic work-exposure visits and vacation (short-duration | 3-5 days) internships to Corporates or Institutions aligning to Students? aspirations.

English Language Proficiency Development

1. English Language to be conceived/ treated as a ?skill? and functional English Language proficiency (reading, speaking and writing) to be developed among School Students, through specially trained English Language Teachers
2. Establish English Language Labs with clearly marked learning schedules for all secondary and higher secondary students.

Vocationalisation of School Education

1. Certificate-level (NSQF 4) Level Dual-Skills to be introduced between Class IX to XII, embedded with Class X and Class XII vacation-time internships. In Schools, where vocational education at Class XI and XII is already being offered ? systematic strengthening of the same with alignment to NSQF, with a wider spectrum of choice and vacation internship for the students to be enabled. Vocational training to be offered through National Skill Development Corporation (NSDC)s empanelled Training Partners and Assessments to be carried out by the respective Sector Skill Councils (SSCs).
2. Training of Livelihoods and Life Skills (TOLLS) for All, to be introduced as a multiskilling intervention with Life-skills as a focus, to all students from Class VI to VIII ? through Club Initiatives

Livelihood Skills

- Plumbing
- Sewing
- Carpentry
- Poultry Farming
- Soap Making
- Incense Stick Creation
- Hand-made Jewellery
- Financial Literacy
- Entrepreneurial Skills
- Basic Management Skill
- Food Processing

Life Skills

- Problem Solving
- Critical Thinking
- Effective Communication Skills
- Decision-Making
- Creative Thinking
- Interpersonal Relationship Skills
- Self-awareness
- Empathy & Stress Coping

Basic Employability And Digital Skills (BEADS)

- A special intervention combining 21st Century Skills and Digital Skills to be imparted to all students of Class VI onwards. Curriculum to be aligned to various competency-levels of employability and digital skills and structured in a manner to enable progressive empowerment and employability.

List of 21st Century Skills

1. Critical Thinking
2. Creativity
3. Problem Solving
4. Perseverance
5. Collaboration
6. Technology, Communication, Innovation, Thinking & Social Skills
7. Media, Digital, Civic, Information & Entrepreneurial Literacy

8. Global & Self-awareness
9. Social Responsibility

List of Digital Skills

1. BASIC
    - ♦ E-mail & Messaging
    - ♦ Word Processing
    - ♦ Social Media for Business
    - ♦ Web-based Research & Problem Solving
    - ♦ Cyber Safety
2. ADVANCED
    - ♦ Coding
    - ♦ Programming
    - ♦ Web & App Development
    - ♦ Search Engine Optimization (SEO)
    - ♦ Search Engine Marketing (SEM)
    - ♦ Content Creation, Data Analysis & Visualization, Cloud Computing and AI Programming.

Industrial Training Institutes (ITIs) and Diploma in Engineering

Industry-aligned Demand-based Skilling

1. Establishing and empowering of Industry-Management Committees (IMCs) across all ITIs and Polytechnics, with a mandate to actively contribute to identification of industry-aligned courses, strengthening of course curriculum with industry-inputs, facilitating regular classroom lectures by industry-practitioners, and industry-immersion programs for students [internship, apprenticeship, industry visits, etc.] and lecturers/trainers (training of trainers, exposure visits, etc.)
2. Enhanced application-orientation in course offering by
    - ♦ Enhanced practical session of 60% to 80% depending across the industry-aligned to
    - ♦ Course structuring with mandatory 1 Year industry immersion for ITI and 1.5 Years immersion for Diploma streams (the overall structuring is 50% in Campus and 50% in Industry Associate)
    - ♦ Mandatory Curriculum Revisions once in every 3-Years, and dynamic curriculum realignments based on IMC?s recommendation on an ongoing manner.

English Language Proficiency Development

1. English Language to be conceived/ treated as a ?skill? and functional English Language proficiency (reading, speaking and writing) to be developed among the Students through specially trained English Language Teachers
2. Establish English Language Labs with clearly marked learning schedules for all ITI and Polytechnic students.

Basic Employability And Digital Skills (BEADS)

- A special intervention combining 21st Century Skills and Digital Skills to be imparted to all students of ITI and Polytechnic. Curriculum to be aligned to various competency-levels of employability and digital skills and structured in a manner to enable progressive empowerment and employability.

Promoting Apprenticeship for Development

- Promoting Apprenticeship Training Scheme with additional incentives (i.e. enhanced Stipends) to trainees for apprenticeship engagement with micro, small and medium enterprises (MSMEs) and rural/ remote-rural enterprises.

Vocationalisation of Higher Education

1. Introduction of ONE industry-aligned Vocational Skill Course at NSQF Level-4, as a mandatory inclusion into all Degree Courses, to be imparted during the final 2 Semesters of the Course
2. Diploma and Advanced Diploma Courses as Optional Choice-based additional credit-aligned course offering to all Students in Degree Program | special focus on data science, ESG, AI & ML, basic coding, etc.

English Language Proficiency Development

Under Graduation & Graduation Degree, Arts & Science Students

1. English Language to be conceived/ treated as a ?skill? and functional English Language proficiency (reading, speaking and writing) to be developed among the Students and standard certified English Language Assessments to be implemented
2. Establish English Language Labs with clearly marked learning schedules for all students.

Basic Employability And Digital Skills (BEADS)

- A special intervention combining 21st Century Skills and Digital Skills to be imparted to all students of Degree programs. Curriculum to be aligned to various competency-levels of employability and digital skills and structured in a manner to enable progressive empowerment and employability.

Promotion of Traditional Skills

- Special incentive-linked apprenticeship-integrated skill courses for Students of General Arts and Science Graduation programs, on futuristic and fusion approaches to traditional industries/ skills i.e. handlooms, agriculture, handicrafts, metalworks, etc.

Graduation in Engineering

Industry-aligned Demand-based Skilling

1. Establishing and empowering of Industry-Academia Centres (IACs) across all Engineering Colleges and Technical Universities, with a mandate to actively contribute to identification of industry-aligned courses, strengthening of course curriculum with industry-inputs, facilitating regular classroom lectures by industry-practitioners, industry-immersion programs for students [internship, apprenticeship, industry visits, etc.] and faculties/ lecturers [training of trainers, exposure visits, etc.], campus recruitment/ placements and promoting industry-academia research and technical consultancy
2. Enhanced application-orientation in course offering with mandatory 1 Year industry immersion/ internship.
3. Mandatory Curriculum Revisions once in every 2-Years, and dynamic curriculum realignments based on IAC?s recommendation on an ongoing manner.

Common and Convergence focused Interventions

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Entrepreneurship Development Cells/ Incubators

- Establishing of Entrepreneurship Development Cell and Business Incubators in each of the Engineering Colleges and Technical Universities with due linkages to start-up funds, angel investors and other government funding schemes/ institutions.

Regional Academy for Trainers? Excellence (RATE)

- Establishing of (sector-specific, industry-led) Regional Academies for continuous professional development of Technical Trainers.

District Fab Labs

- A common shared-resource engineering and technology facility (OR digital fabrication facility) to be established to support young entrepreneurs and MSME units to rationalise their costs of investments into next-generation technology facilities.

Area of Focus

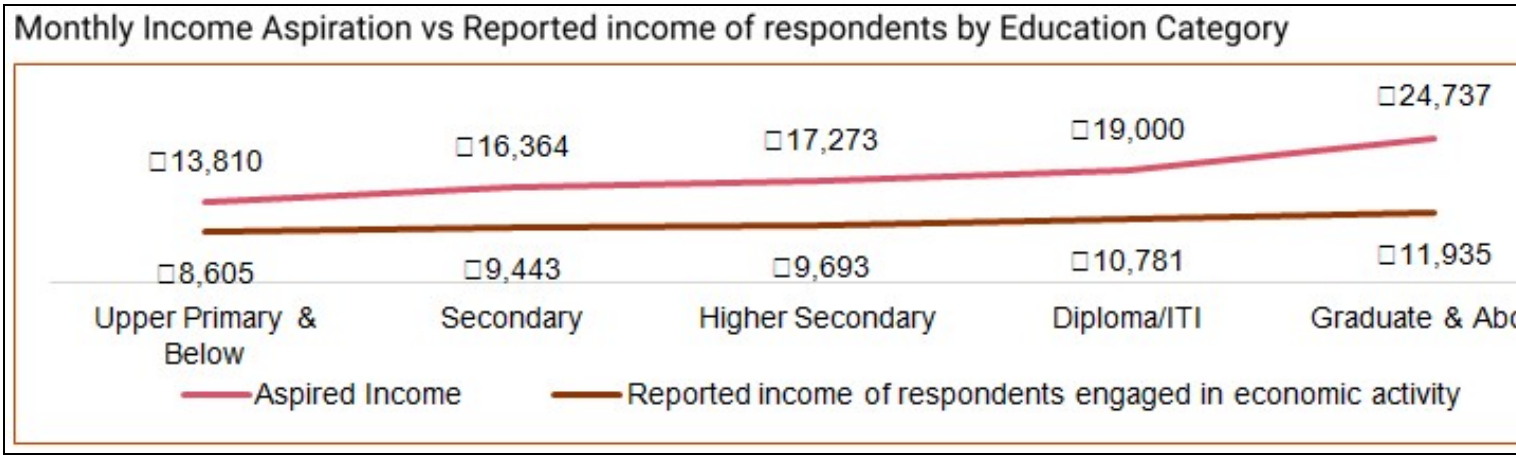
Awareness Generation

1. There is low awareness among the youth and employers about vocational training and skill development interventions implemented by the Government.
2. Social Media could be used for awareness generation. Case studies, in the form of short-films, capturing the positive impact of skill development interventions to be developed, and utilised for promotional purposes.

Breaking the myths and market perceptions of the Youth

1. The youth need systematic counselling about the larger economic trends and career prospects, especially about options outside the public sector employment or employment in certain white collared and high-prospect blue-collared jobs.
2. There is mismatch in perception and aspirations of youth about the salaries/wages, working conditions, career growth prospects, etc.

Hence, there is a requirement for initiating career and market related counselling at the secondary levels of education and continued through higher levels of education.



Convergence of Skilling Interventions

1. Various line ministries/departments in the State and some of the PSUs are involved in imparting skill development/vocational skills including career counselling and job fairs, apprenticeships, self-employment, and entrepreneurship development.
2. There is an urgent need to converge (in spirit and in practice) the interventions/ efforts under these institutions to ensure standardisation of approach, quality assurance, market responsiveness, and de-duplicating efforts (and/or beneficiaries).
3. There is also a case for developing a common Labour Market Information System (LMIS) that will aid effective monitoring of Govt. programs, dynamic decision making, and tracking demand and supply of labour force across the State. These efforts can enable co-ordination between the stakeholders (the youth/trainee, the employers, and the training service providers), leading to better matching of labour demand and supply.
4. Government Order (Ms) No.27 dated 30.12.2021 pronounced the Integration of all skill training programmes conducted by various Government Departments in the State through TNSDC (Tamil Nadu Skill Development Corporation), though the GO is already issued, its implementation in spirit and governance is not to the expected levels of convergence.

Training of Trainers

1. There is dearth of trainers and master trainers across the State, especially in the less resourced Districts like Dharmapuri, Perambalur, Ariyalur, Virudhunagar etc.
2. There is also limited efforts and investments for continual upgrading/ upskilling of the trainers.
3. Establishing Regional Trainers? Academies (across Chennai, Coimbatore, Madurai, Trichy, and Tirunelveli) equipped with adequate facilities to train, assess and certify trainers and in partnership with the Sector Skill Councils (SSCs), industry bodies and/or relevant national institutions will help develop a pool of master trainers.
4. In line with the Centre of Excellence of the Apparel Sector Skill Council at Tiruppur, opportunities exist to collaborate with SSCs across sectors like, Capital Goods, Logistics, Automotive, Food Processing, Healthcare, etc.

Improving participation of Women in Economic activity

1. Women career aspirants reported concerns about the non-availability of proper transport, sanitation, safety, and security at workplaces.
2. In fact, some of the SIDCO estates have highlighted the lack of public transport connectivity.
3. The study found that about a quarter of the female respondents identified restrictions placed upon them by their families as a challenge in pursuing a career, especially after marriage.
4. Industries have highlighted a preference for employing women, finding them to be better in regularity and discipline. Thus, there is a need for dedicated effort to counsel women and their families/ community to improve their participation in the labour force.

5. In addition, the Govt. and Industries could work together to provide adequate support systems like the public transportation, day-care facilities for children, and security.

Strengthening Soft-skills and Employability Skills

1. The study found that employers across sectors have acknowledged the limitations on **inter-personal skills and communication skills** among the youth, as a constraining factor, hampering their employment prospects.
2. Businesses in the IT-ITES and tourism sectors highlighted the need for strengthening the skills in spoken English.
3. Given that the existing educational institutions largely focus on trade specific skills and soft-skills and other employability skills take the backstage, it is important to consider designing targeted interventions on improving the **soft-skills and employability skills** of the State?s Youth.
4. Learning and experiences of other States in this regard can be leveraged; efforts shall be made to develop a custom-pack of the interventions, encompassing **21st century employability skills and soft-skills**, in addition to **Spoken English** and **basic information and communication technology (ICT)**.
5. These interventions could be implemented across Schools and Colleges, in addition to integrating the same along with long-term and short-term skill development program.

Strengthening Industry-experience

1. It is seen that the earning potential among graduates does not vary significantly from Diploma / ITI certificate holders over their career path.
2. To enhance the value of the programs at the graduate level, it is necessary to strengthen their **exposure to work environments (through guided industry-visits, internships or apprenticeships)** for both technical and non-technical programs across the industrial and services sectors.
3. It is also important to consider mandatory **industry attachments for the faculties/ trainers**, to develop industry-ready workforce.

Strengthening deployment of Internship/ Apprenticeship at MSMEs

1. MSMEs have highlighted the lack of availability of trainees to be deployed as apprentices at their industrial units, as the trainees are often placed in large industries in bulk.
2. **Enhancement in the Government supported stipends to the trainees for preferring MSMEs over the large industries**, or a hybrid model of additional incentives/ stipend in addition to extended period of deployment [increase in the apprenticeship period] or assurance of regularisation into employment, could be considered to improve participation of MSMEs and balance the deployment with small/medium and large units.
3. The MSMEs have also faced operational constraints with frequent attritions among the trainees deployed as apprentices. It is suggested that an appropriate check and balance mechanism put in place to ensure successful completion of the apprenticeship program by the trainees.
4. It is also suggested that there is a mandatory inclusion of ?internship? in all the short-term courses, to enable adequate industry exposure and hands-on experience.

Promotion of Traditional Sectors & Indigenous Products

1. Tamil Nadu is home to several traditional vocations of handicrafts, handlooms and arts.
2. However, many of these are at the risk of dying out owing to lack of appropriate patronage, documentation, and transmission of skills.
3. The youth prefer alternate vocations more lucrative than the traditional vocations. It is necessary for the Govt. of Tamil Nadu to promote the traditional skill-based occupations by formalising the traditional skills and ensuring market access/development through linkages.
4. Tamil Nadu Skill Development Corporation (TNSDC) in partnership with agencies like Tamil Nadu Handicrafts Development Corporation (TNHDC), Khadi and Village Industries Commission (KVIC), etc., should implement targeted interventions including developing Qualification Packs and carry out training programs including through Recognition of Prior

Learning (RPL) Mode.

Catering to the Emerging Needs

Skills demand is driven by the policy initiatives, programmatic interventions, and technological advancements.

1. **Electric Vehicles:** The Indian Government?s push to popularise the electronic vehicles through the FAME (Faster adoption of Hybrid and Electric Vehicles) I & II Schemes present both a challenge and opportunity for the Auto & Auto-component sector to cater to the emerging demand. While the initiative is said to cut several millions of jobs, it provides an opportunity for up-skilling and re-skilling of the existing workforce to redeploy them into the rapidly changing industry needs. This also mandates the need for introduction of newer courses aligning to the emerging market requirements.
2. **Language Training**: Tamil Nadu is one of the favoured destinations for Investments (both domestic and foreign) in the country. The State has a strong tourism sector owing to its cultural heritage and medical facilities. The increased interactions with the advent of globalisation makes multilingualism a mandatory skill need. Trainings in other Indian languages, English and other foreign languages like Japanese and Chinese are necessary to maintain the competitiveness of the local labour market.
3. **Infrastructure:** 12 cities in Tamil Nadu are upgrading their infrastructure under the smart cities mission. With this, there is an emergence of new-approach to conceptualising public infrastructure. There is an opportunity for the state to become a case study for state-of-the-art facilities. These initiatives have a visible inclusion of ?innovation? and ?technical and technological improvements? in every facets of reconstruction and/or improvement to the basic and advanced infrastructure e.g. automated bio-toilets, metro-rail, etc. Prefabricated structures, ?smart? electrical equipment and appliances, and façade installations are in high demand. In addition, green jobs including adoption of Solar Technology, Rainwater harvesting, sewerage and drainage upgradation, recycling of plastics etc. will be the other areas of demand.
4. **Paramedical & Geriatric Care:** The State?s population is ageing with 30% of the State?s population to be aged above 50 years by 2026. High prevalence of lifestyle diseases including diabetes are on the rise not only in the State but also across the globe. These trends are expected to drive the demand for paramedical professionals providing support in Scanning, Testing & emergency services apart from Geriatric care for the aged and the unwell.
5. **Automation and Robotics**: Automation is driving the replacement or optimization of labour in several industries at a global level. Though the manufacturing industries in the State, do not see an immediate transformation into a highly automated environment, there is an opportunity to cater to the global market for such developments. Institutions like IIT Madras, NIT- Trichy and Anna University could partner with each other for introducing training courses in the field of automation and robotics.
6. **Data Analytics, Big Data and AI:** The IT/ ITES sector is seeing a major evolution in the nature of services, the products provided and the associated skills. Data Analytics, Blockchain, Big Data, Machine Learning & Artificial Intelligence, are some of the key areas of skill requirements in the sector. Tamil Nadu could emulate other States that have initiated training programs for tapping into such potential. Institutions in the State including University of Madras, IIT-Madras, IIM-Trichy, Anna University, NIT-Trichy and Madras School of Economics can be partnered with for the programs.
7. **Emergency and Disaster Management** : The State has been exposed to the vagaries of nature having witnessed droughts, floods and cyclones during the recent years. To respond effectively to these challenges, the State will need skilled workforce in the field of natural disaster management. The key emerging skills would include environment management, lifeguard, first aid training, and earth mover operators among others.

Demand-responsive Sectoral broad basing and Targeted Skilling

1. There is a requirement for diversity in sectors as well as training in higher levels of the NSQF including at supervisory roles and those with higher technological requirements.
2. Even in ITIs and polytechnics, the exposure to advanced machinery is less than sufficient to make the candidates job ready.

3. On the other hand, key sectors aspired by the youth include Auto and Auto-ancillary, Food Processing, Agro-business, handicrafts and handlooms.
4. These sectors are also witnessing concerted efforts from the Govt. and investments from the Private sector.
5. They also hold potential for considerable self-employment, especially among females.