

Government of India
Ministry of Skill Development & Entrepreneurship
Directorate General of Training

New Delhi,
Dated: 15.7.2021

To,

The Principal Secretaries/Commissioner of State, UT of department
Dealing with ITI/Apprenticeship Training

Subject: - Model Career Progression Guidelines for ITI Instructors – Reg.

The Directorate General of Training (DGT, MSDE), Ministry of Skill Development & Entrepreneurship is entrusted with regulating and implementing standards and norms of Craftsmen Training of inter alia Craftsmen Training Scheme provided through Industrial Training Institutes (ITIs) that includes curriculum, content, training methodology, assessment, etc. Towards this it also fixes eligibility components and norms for instructors to train to impart training in a given trade.

2. Considering instructor's role is critical in vocational training for transferring ability, knowledge and skill (AKS) to trainees which further helps in creation of required skilled workforce the current set of guidelines and norms have been framed in wider consultation with different stake holders including State Government, trainers, employee associations and industries. It is felt that framework for comprehensive policy of instructors which caters to both recruitment rules and capacity building of trainers would usher in standardization as well as meet the requirement.

3. In this regard a guideline/model progression policy covering various aspects of trainer lifecycle i.e. recruitment, pre-service training, induction program, refresher training and promotions has been developed. This document captures details on recruitment process including that of conducting of trainer eligibility test, structure of induction program for new recruits and policy of including refresher training in promotion rules.

4. To attract and retain pool of talented instructors, it is pertinent that States prepare and implement their own career progression guidelines wherein provision for induction and in-service training may be made. Though not provided in the CPP document, it is advised to consider salary fixation at entry and later stages to modify & upscale any pay scales lower to that of Senior Secondary School System.



5. We look forward for your continuous support in implementation of STRIVE. The model guidelines as prepared by DGT is being annexed along with this letter for reference. The approved career progression guideline from your state/UT can be shared with NPIU by 30th September 2021.

Encl : Model Career Progression Guidelines.


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Copy to-

1. The Directors of State/ UT of department Dealing with ITI/ Apprenticeship Training
2. Deputy Director General, DGT, New Delhi
3. The Directors, RDSDEs- with a request to follow up with state/UT
4. Director- CD section, DGT, New Delhi

**Draft Guidelines for States and UTs to Develop
Sustainability Plan for
Recruitment, Training and Career Progression
For Crafts Instructors/ Trainers working at Govt. /Pvt. ITIs**

Under

Skills Strengthening for Industrial Value Enhancement (STRIVE) Operation

**Directorate General of Training
Ministry of Skill Development and Entrepreneurship
Government of India
June 2021**

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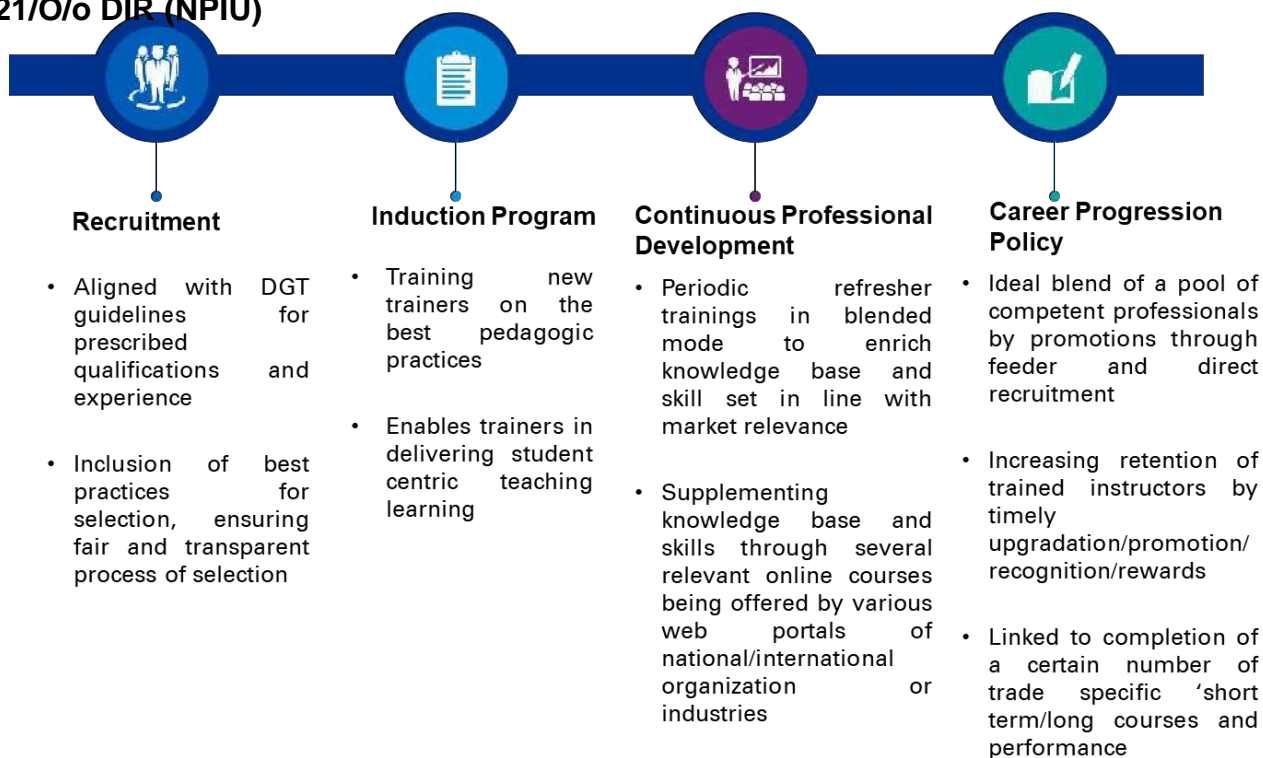
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1. Executive Summary

1.1 An educational system requires certain key building blocks to function efficiently and effectively. These blocks include availability of trained teachers, curriculum, pedagogy, assessment tools, infrastructure, equipment, industry connect and others. Starting since 1950, ITI ecosystem now has around 15,000 DGT affiliated ITIs (Government and private) with 137 NSQF aligned trades. These ITIs have around 23 lakhs trainees enrolled and undergoing training in the trades of six months/ one year/ two-year duration. ITI graduates have been actively contributing in the nation building through their skills and workmanship. In times to come, the nation will require more skilled manpower with diverse skill sets and competencies mainly owing to changes envisaged with launch of Industry 4.0, coupled with new and emerging technologies such as Internet of Things, Machine Learning, additive manufacturing etc. To deliver quality training to the future of workforce, the availability of quality, competent and trained trainers is of utmost importance.

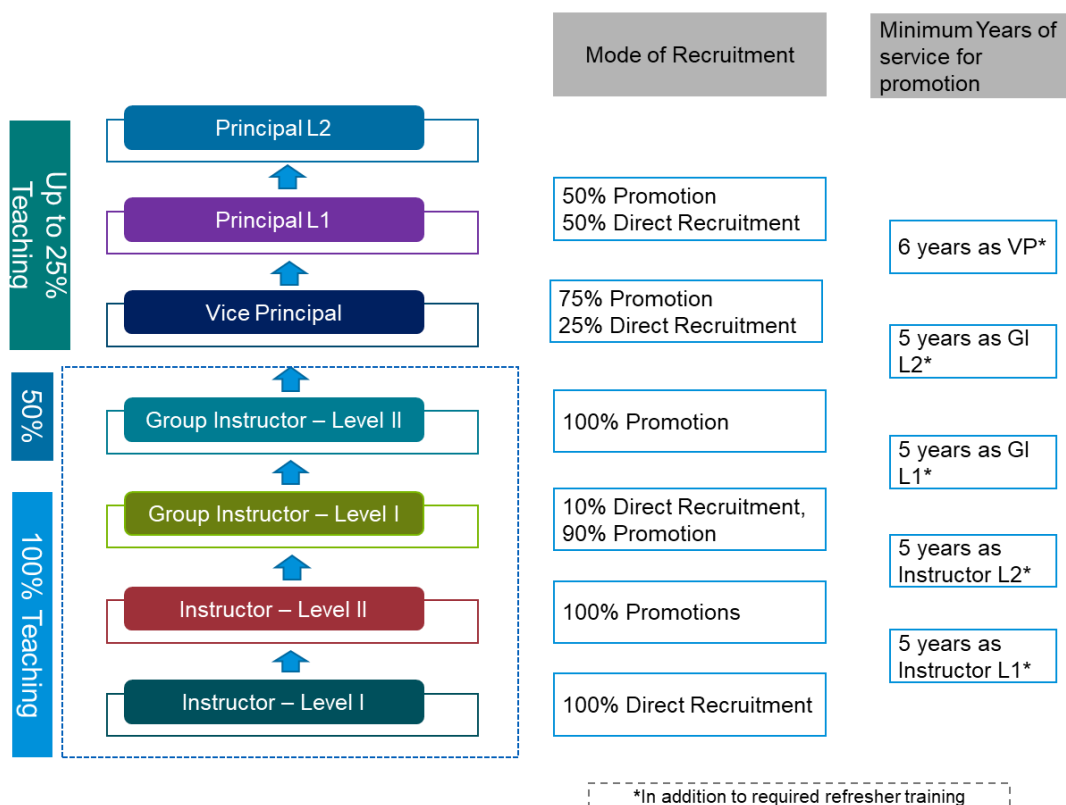
1.2 Trainer's role gains criticality and plays a profound impact in vocational education and training system wherein by enabling effective learning delivery to students, they help in creation of a pool of required skilled manpower. Currently, the system is witnessing significant trainer vacancy with increased dependency on engaging contractual faculty and/or guest faculty coupled with lack of competent staff, especially with respect to skills involving practical trade and limited pre-and in-service training capacities for teaching staff and principals. This has led to systemic issue wherein most of the states face bottlenecks in the recruitment process of teaching staff as it has become less aspirational, monotonous with limited opportunity towards career progression. Hence it becomes imperative for an educational system to focus on to invest in the training, capacity building, and periodically updation of instructors' skill set in order to ensure efficient teaching and learning process. STRIVE aims to address the issue of availability of trained teaching staff through reduction in vacancies of instructors in government ITIs as one of major reform activity to be taken by States by introducing and implementing a detailed career progression policy.

1.3 Under STRIVE project there is considerable focus on the elements related to development of sustainability plan/ framework which underpins the need for continuous capacity development of Instructors and Staff. The key performance indicators (KPIs) of the STRIVE project have been specifically designed to expand access to quality and market driven courses, affordable education and increased enrollment of female students under Craftsmen Training Scheme (CTS) and Apprenticeship Training Scheme (ATS). It is envisaged that there shall be increasing number of students graduating with required skills and competencies, having adequate industrial exposure through On-the Job Training (OJT) resulting in better employment and learning outcomes. In this context, hiring of competent trainers, providing them structured induction training and the continuous capacity development of instructors/trainers along with tenure-track promotion has been identified as a key input for sustainable development of the vocational ecosystem. The document discusses these in detail across four phases of trainer lifecycle as outlined below:



1.4 The current document provides a broader guiding framework on each of these four phases for creating a sustainable career progression policy at each State level. DGT has also set up an online platform “Bharat Skills” which hosts teaching and learning material pertaining to CTS, CITS, ATS and several other short term NSQF compliant courses in blended mode.

1.5 The document proposes uniformization of organizational hierarchy across States/UTs along with mode of recruitment at each level, minimum initial pay band and tenure-track promotion. The same is illustrated below:



1.6 Adhering to suggested framework, the States will be able to attract best talent, minimizing the attrition rate and create a strong pipeline of self-motivated and goal oriented competent instructors to impart quality training to the students of the ITIs.

2. Incentivization to States

2.1 The program incentivise the States to develop a “Sustainability Plan with clear focus on Recruitment, Training and Career Progression Policy in respect of Craft Instructors”. This would not only help in the achievement of the stated objectives of sustainability during the project period but beyond that it shall create a long-lasting impact on the ITI ecosystem and achieve the stated objectives of “Make in India” Policy by making India a talent powerhouse.

2.2 STRIVE incentivizes the State Government to take steps to reduce the Crafts Instructors vacancies in the Government ITIs. One of the KPI for the States/UT’s participating in STRIVE is to take effective steps towards reducing the vacancies by at least 20% of the vacant positions as on 3rd January 2019. (Baseline data in the Government ITIs for calculation purpose) A significant amount of fund allocation has also been earmarked for achieving this end objective. It would also be easier to achieve this objective by developing and implementing a sustainability plan for CTS trainer.

2.3 The ITI Grading Framework puts special emphasis on availability of trained trainers vis-à-vis sanctioned posts. Timely fulfilment of the posts will result in better grading of ITIs.

3. Guiding Framework on preparing sustainability plan by States

3.1 Recruitment of the Craft Instructors/Trainers

3.1.1 Recruitment of the best talent lays strong foundation to teaching and learning ecosystem. The recruitment process of ITI Instructors/ trainers must include the best practices of selection, ensuring fair and transparent process of selection, fulfillment of prescribed qualification and experience criteria and incumbents possessing an aptitude for teaching etc.

3.1.2 Education being a concurrent subject matter, the States have notified the Recruitment and Promotion rules in respect of each category of post at ITI, prescribing minimum qualifications, experience and other eligibility criteria conforming to DGT prescribed guidelines in this regard. Adopting DGT guidelines has an advantage of creating a desirable heterogeneous group of Instructors/Trainers possessing PG/Degree/Diploma/ NAC/NTC with NCIC which may prove to be an asset base for the whole system and ensure optimum growth of the institute.

3.1.3 In current scenario of fast obsolescence, the futuristic needs/emerging trends and introduction of new courses like Artificial Intelligence, Internet of Things, additive manufacturing, drones and increasing demand towards similar courses shall require an altogether different skillset among the trainers. Hence, in order to sustain in such an environment, the States would require to suitably amend the recruitment procedures incorporating newer qualifications and skillset among its trainers, as per changing training needs and labour dynamics of the geography (regional, national and international needs).

3.1.4 Steps of Recruitment

- a. Each State to have set a clear cut policy for constitution of Recruitment Committee/ Selection Panel, Nationwide Advertisements in print/digital media for vacancies, compilation of applications, scrutiny of applications, setting up of Question papers, conducting written/online examination, evaluation, practical examination and issue of appointment orders. An earlier order no. MSDE-19/03(8)/2015-CD dated 7th January 2016 was issued prescribing guidelines for recruitment of the instructors for ITIs. During wide stakeholder discussions, it has been observed the states have variances in following the orders.
- b. The minimum eligibility criteria for fresh recruitment of instructors would be as per NCVET approved curricula for all engineering and non-engineering trades. Out of two Instructors required for the unit of 2(1+1), one must have Degree/Diploma and other must have NTC/NAC qualifications. It is to be further clarified that NCVET does not encourage reserving Degree/Diploma candidates for theoretical training and NTC/NAC candidates for practical training. An example of same is as follows:

Academic: 10th pass with Science and Mathematics under 10+2 system from recognized School/Board.

Technical: (i) Four-year Degree in Engineering / Technology from a recognized University/Institution, (ii) One-year experience in teaching / working in a relevant industrial unit/organization after acquiring the requisite qualification and (iii) CITS certificate

OR

(i) Three years' Diploma in appropriate branch of trade concerned from a recognized University/ Board/ Institution, (ii) Two years' experience in teaching / working in a relevant industrial unit/organization after acquiring the requisite qualification and (iii) CITS certificate

OR

(i) National Trade Certificate (NTC) or National Apprenticeship Certificate (NAC) in the relevant trade from a recognized Institution with Craft Instructor Training Certificate (for those trades where courses under Crafts Instructor Training Courses are available), (ii) Three years' experience in teaching / working in a relevant industrial unit/organization in relevant field after acquiring the requisite qualification and (iii) CITS certificate

Note: Duration of CITS training would not be counted while calculating required duration of experience.

- c. States need to mandate CITS training as one of eligibility criteria for all fresh recruitment from 26th July 2019. A notification has been released by DGT in the same regard on 26th July 2019. In cases of CTS trades where CITS trade is not available, DGT will roll-out a scheme for training of untrained instructors and also a pre-service training program for all CTS trades will be prepared within the broader mapping or allied modalities. The states will have to ensure CITS training of existing untrained candidates within 3 years of such roll-out. However, the states need to take this as an exemption clause from DGT's current notification.
- d. The states need to adopt the following guidelines for the recruitment of ITI trainers. The following needs to be kept in view while preparing the merit list/panel of selected candidates.

- i) A national level teacher eligibility test will be conducted to evaluate the skills, competencies and aptitude of potential applicants by DGT. The score(s) of such test will be valid for a period of two (2) years.

The States may consider the scores of national level teacher eligibility test or may conduct their own teacher eligibility test if they wish so.

- ii) The threshold condition for experience criteria prevails as given in DGT norms
 - iii) The above criteria will also apply for contractual employment.
- e. The States need to follow DGT guidelines to fill the posts such as Principal, Vice Principal/Training Officer, Deputy Training Officer (Group Instructor), Assistant Training Officer (Craft Instructor), Training and Placement officer, Drawing Instructor, Workshop Calculation & Science Instructor (Mathematics Instructor) and Employability Skills Instructor.
 - f. States/UT to prepare a plan for filling up vacant posts within 12-16 months of sanctioning the posts well in advance of start of session. The plan should highlight the timelines and process to be followed by the state for filling up the vacant posts.
 - g. Appoint guest/contractual instructors with continuous tenure of more than six months per year keeping in view that filling up of posts on regular basis is generally time consuming process through Staff Sub-ordinate Selection Boards (SSSB). A provision of filling the post on contract within 3 months of vacancy should be made in recruitment rules of the state.
 - h. Qualification for the guest/contractual instructors should be same as that of regular instructor, as prescribed under DGT Norms.
 - i. Selection process for the guest/Contractual instructors shall be based on above steps (a) and (b). Also, a minimum of at least 2/3rd of basic salary of regular craft instructor should be paid as remuneration to these trainers. The same has been notified in letter no. MSDE-19/02/2018-CD(05) dated 26th July 2019.
 - j. All State Governments to appoint Principal on full time basis, on regular/contractual mode, as the case may be, for every ITIs.
 - k. In line with increased unit size, it is proposed to reduce the number of units to be supervised by Deputy Training Officer (Group Instructor) from 8 to 6.
 - l. Please refer section V and VI of Agenda item 9 in DGT's notification no. MSDE-19/03/2015-CD dated 1st January 2016 for guidelines pertaining to **induction of ex-service men**

3.2 Induction Program and mandatory Crafts Instructor Training Scheme (CITS) for newly recruited trainers

3.2.1 The prime duty of an instructor is to impart and transfer the requisite professional knowledge, skills and attitude (through several extra-curricular activities) in the trainees preferably by adopting a 'blended mode of learning' so that trainees are able to retain what has been taught, comprehend, analyze and help in problem solving etc. In order to perform the above 'tasks' apart from Instructor's core competencies and professional knowledge, trainers need to understand the best pedagogic and andragogic practices to support student centric teaching learning processes. The training will also focus on defining outcome-based competencies of learners and its attainment through demonstrable abilities. In wake of this, a structured induction program for newly recruited instructors/trainers needs to be developed and implemented. State may introduce a standard induction program covering teaching methodology and state-specific 'mandatory requirements' (conduct rules, financial and procurement rules etc.) for all the trainers.

3.2.2 For instructors/trainers who are in service, the following norms shall be applicable as per Section

(xi) of NCVT notification No. MSDE-18011/DGT/2017-TTC (Pt –III) dated 04th October 2018. The same may be accessed from news and updates section of NCVT MIS under the file name “Reforms in AITT conducted under the aegis of NCVT –regarding”. DGT has further published implementation guidelines of same. For detailed description on CITS, please refer to **Annexure V**. A notification stating equivalency of RPL CITS certificate with respect to one-year regular CITS certificate has been released by DGT on 26th July 2019. A suggestive structure for designing induction program has been annexed at **Annexure II**.

3.3 Continuous Professional Development (CPD) of Craft Instructors/Trainers

3.3.1 It is essentially required that ITI Instructors are encouraged and deputed to undergo industrial trainings periodically, attend refresher programs being conducted at several National Skill Training Institutes and undergo CITS/domain/trade specific refresher trainings periodically to enrich their knowledge base and skill set necessary to remain abreast with current industry needs and labor dynamics. Craft Instructors/Trainers should be proposed to undergo several training programs during their career/working tenure in order to strengthen their professional capacities in the relevant sectors/trade based on updated/ relevant industry requirements, labour market dynamics and technological advancements. Instructors/Trainers at different points of their teaching careers have different professional developmental needs, aspirations and may require specific skilling, re-skilling to respond effectively to new institutional and national educational directives and initiatives.

3.3.2 Apart from NSTIs, other Govt. /Private organizations offering training programs may also be considered as per the specific training needs. MSME has set up Tool Rooms/Common Facility Centers (CFC) across the country. The list of courses being offered is available on the website of MSME. Similarly, a list of domain specific short-term courses is listed in National Qualification Register (NQR) which can act as a reference point in planning sector specific training plan for instructors/trainers by state government. Implementation of these measures will be helpful in transformation and development of ‘Pedagogical Leadership’ in the individual concerned leading to creativity, innovation and adoption of best practices in teaching and learning processes. Instructors may also be encouraged to supplement their knowledge base and skills through several relevant online courses being offered by various web portals of national/international organizations or industries. Obtaining certification in the courses being offered by ‘Sector Skill Council’ can also be considered for professional development. The department may consider reimbursement of course fee on successful completion of such courses by the instructors.

3.3.3 An illustrative list of basic and advanced Training Programs has been identified based on inputs from the States and NSTIs and is depicted on **Annexure VI** which may be considered by the planners to prepare State’s Training Calendars so as to serve the long-term requirements of ITIs. State may also consider allocation of certain budget exclusively for this essential component of CPD of Instructors/Trainers. It may be noted that most of the refresher courses being offered by NSTIs are free of cost. State governments may devise appropriate mechanisms aimed at attracting “master trainers” from state government departments such as Public Works Department, State Electricity Department, State Roadways, PSUs, CPSUs and private sector industries etc. to bring more value to ITI ecosystem. ITIs may be encouraged to engage with Sector Skill Councils and collaborate with local industry for strengthening of teaching and learning activities with a focus on development of sectoral niche skills in the trainees. The State Governments should also explore partnerships with leading government/private training institutes such as NITTTR, Tool Rooms, Common Facility Centers, industry associations, NISEBUD and others for training their trainers on latest developments of

teaching methodology and industry advancements.

3.3.4 The CPD system will have a full suite of CPD activities in all the occupational areas as well as common areas such as soft skills, employability skills. The training workshops are conducted at various National Skill Training Institutes (NSTI) through their regular programs. The calendar of activities is available on the web-portal. Further NSTIs can also design tailor-made workshops/courses to cater to the specific needs of States by designing and implementing programs as per requirements of trainers. Meanwhile, NSTIs are also in the process of upgrading their infrastructure and facilities for conducting such programs throughout the country. An illustrative list of courses in CPD suite mapped to trades is annexed at **Annexure VI**.

3.3.5 In addition to the courses and workshops available at NSTIs, refresher courses will also include mandatory and optional training courses as stated above, DGT has developed an online platform, '*Bharat Skills*' to address the needs of in-service training requirement of trainers. The portal will host a range of courses in occupational areas as well as soft skills and employability training. DGT is also organizing trainings on latest technologies in collaboration with IBM, Microsoft, Adobe and others. The State governments should encourage their ITI trainers to actively participate in these trainings. Continuous Professional Development for Trainers (CDP) will mainly include:

- a. **Mandatory refresher courses:** These shall be trade specific short-term courses at NSTIs and Online courses at Bharat Skills. These courses may also cover certain domain specific short-term courses as listed in NQR. Apart from these, a structured three-level training program on NSQF compliant teaching methodology has been designed by DGT for all levels of officers and instructors [Details on NSQF in **Annexure I**].
- b. **Optional specialized courses:** To further enhance the competencies NSTIs/ITIs may sign MoUs with industry to undertake production/consultancy work ancillary units and online courses through Knowledge Hub shall be offered in collaboration with industry/sector skill councils.

Specific Professional Development Programme for senior faculty/administrators/planners:

As trainers progress in their careers, they can be given options for specific professional development programs, specifically catering to managerial capacity enhancement, institutional development, building corporate image of the institution, quality accreditations, revenue generation, introduction of best practices in skilling at par with international standards. This will help them to meet the responsibilities of new roles to which they may be promoted.

- i) **Deputy Training Officer (Group Instructor)** - Group Instructors will be responsible for the strategic positioning, management and giving need-based strategic curriculum design & implementation of their courses. Professional development for group instructors will be in the form of short workshops and focused discussions of best practices. The group instructor learning community (online and offline in the same district state wise community) can also be a platform for Senior Management to discuss new developments in the education landscape. In addition, group instructor's knowledge and skills in course strategic positioning and curriculum understanding and implementation can be enhanced through regular consultation with CSTARI and NIMI and NSTIs. Group Instructors/Foreman of some of the well performing ITIs may plan to conduct 'In house Training' for the benefit of instructors working in other ITIs of the State.
- ii) **Vice Principal** – Vice Principals will be responsible for designing training program

schedule and monitoring of training implementation as per schedule.

- iii) **Principal/Academic Mentor** - Academic mentors will lead teaching and learning projects at ITIs and contribute to their ITI s wider professional development activities through industry collaboration and wider ITI system. As they will be responsible for overall growth and enhanced Internal Revenue Generation (IRG) through conduct of short-term courses and providing consultancy to industry, conduct short term courses on high end/latest Machinery/Equipment(CNCs and other for optimum utilization of spare infrastructure and may act as ancillary unit and thus create a sustainable ITI ecosystem. In preparation for this role, they will be motivated to complete a 100-hour of blended learning programme aimed at strengthening their abilities to provide overall mentorship to the institute including affairs of placement, job fairs, industry connect and training of fellow colleagues. Principal of ITIs may be encouraged to strengthen co-ordination with industry for OJT based learning and National Apprenticeship Promotion Schemes (NAPS).
- iv) **Additional/Joint/Deputy/Assistant Directors (ITI)** - Deputy/Assistant Directors provide guidance to group instructors on programme direction and strategy. At the Pedagogy Community meetings, the deputy/assistant directors meet once a month to share and appraise innovative teaching and learning practices. This facilitates cross pollination of ideas as well as collaboration on educational initiatives across ITIs.

c. **Formation of various Learning Communities**

The States may encourage creation of various learning communities in the ITI ecosystem. The learning communities can be for Instructors, Group instructors, Academic mentors and programme directors. These communities can meet at defined intervals and they can also have their online presence for better coordination and learning from each other.

d. **Development of a learning competency framework for trainers**

The States may develop a Competency Framework for trainers. The framework will aim to define what trainers are expected to know and be able to do at each stage of their careers, including key supporting professional values. It will also identify a professional development roadmap including training need analysis that will assist Instructors in their journey as trainers. The competency framework will eventually be linked with the career progression policy, promotion policies, increments etc. A sample competency framework is given in **Annexure III: Sample Competency Framework**.

3.4 Career progression policy

3.4.1 A well-defined career progression policy helps in increasing retention rate of trained instructors and hence helps in achieving ulterior objective of reducing vacancy rate. The career progression of the Instructors/Trainers may be linked to completion of a certain number of trade specific 'short term/long term courses' (offline and online at various NSTIs and other recognized Govt. /Pvt. Institutes) and linking the same with Recruitment and Promotion rules. The training schedules are available on the respective websites of institutions offering courses pertaining to 'training of trainers. It has been observed that in most of the States, the promotion to higher post is done through feeder category along with certain percentage of total posts being filled up directly through Public Service Commission in order to create an ideal blend of a pool of competent professionals. Feeder category

refers to promotions from existing pool of human resources.

3.4.2 The career progression policy for ITI staff will help them set realistic expectations of their career growth by suggesting time frames for certain milestones in their career (like promotions) and identifying developmental areas for trainers before becoming eligible for their next career milestone.

3.4.3 The policy shall spell out all the requisite details for determining the eligibility for the promotions of instructors, group instructors, Principal and so on based on continuous professional development of trainers, officers and annual performance appraisals along with following broad criteria:

- a. For promotion to the post of Group Instructor (Deputy Training Officer), 90% of post in promotion quota will be through finalizing the seniority lists of feeder category. Remaining 10% of posts will be filled through direct recruitment by state-level recruiting agency such as Public Service Commission/ State Sub-ordinate Service Selection Board (SSSB).
- b. For promotion to the post of Vice - Principal, 25% of post in promotion quota will be reserved for direct recruitment through state-level recruiting agency such as Public Service Commission/ State Sub-ordinate Service Selection Board (SSSB). Remaining 75% of posts will be filled through promotion by finalizing the seniority lists of feeder category.
- c. For promotion to the post of Principal, 50% of post in direct recruitment through state-level recruiting agency such as Public Service Commission/ SSSB and 50% of post in promotion by finalizing the seniority lists of feeder category.
- d. Pay parity should be restored and initial grade pay for each level should be fixed as suggested in chart at Section 1.
- e. After eight years of service as instructor there should be a change in designation from Assistant Training Officer to Deputy Training Officer with change of applicable pay scale.
- f. Key Result Areas (KRA) should be defined for instructors.
- g. Career Development Path of trainers and promotion systems should be established/defined.
- h. Supporting trainers in ITI's is a shared responsibility, ensure effective co-operation and coordination between ITI, State and MSDE.
- i. Make CPD part of the overall career progression plan. One full suite of CPD that includes induction program, periodic training and online courses to aligned with NSQF for which the matter may be taken up with CSTARI, regional NSTIs or similar institutes as decided by the State.
- j. Qualitative performance during skill competitions, placement of trainees, development of entrepreneurial skills in trainees etc.
- k. Institutionalize awards at State level for best trainers as a recognition of their performance

4. Guidelines for Improvement of working conditions of trainers

4.1 Unsafe working conditions can lead to attrition of the Instructors and trainers or drop in motivation levels of trainers. Conducive working conditions in the ITI, must take into account instructors' health and their wellbeing, as the quality of care provided by state is partly dependent on the quality of their work environment in the ITI. The state/UT's shall issue guidelines/instructions/checklist/charts to make aware about the below guiding principles. The purpose of these guidelines is to make sure that the improvements taken by facilities are based on the realities of their ITI's situation and lead to pragmatic action.

- a. Controlling occupational hazards and improving workplace safety

Safety is a high priority, for the sake of staff as well as trainees. Hygienic, safe and hazard-free environment is essential to the delivery of quality training. Potential risk hazards need to be identified and Standard operating procedures for working in such places covering risk mitigation steps has to be developed and placed at appropriate places.

b. Musculoskeletal hazards and ergonomic solutions

Deals with musculoskeletal disorders – the sorts of injuries which can arise when staff lift weights that are too heavy for them, work in awkward positions, or carry out repeated actions. They are among the most common causes of staff injury and absence. An annual session by certified physio trainer for awareness on best ergonomics should be conducted at ITI level.

c. Maintaining optimal trainer- trainee ratio and ratio of trainer vis-à-vis training infrastructure vis-a-vis number of trainees, as prescribed by DGT, for healthy learning environment

d. Tackling discrimination, harassment and violence at the workplace

The hazards examined in this module are not necessarily recognized as risks to workplace safety, but they are as real as the threat of the danger of fire –and need to be handled as firmly and as effectively. It needs to watch all aspects of discrimination and violence, such as Discrimination and violence suffered by staff from trainees, by staff from staff, discrimination and violence suffered by trainees from the staff including women harassment at workplace.

e. Working time of ITI organization is a major responsibility in ITIs: The biometric system may be introduced for staff and trainees.

f. Selecting, storing and managing equipment and supplies

Ensuring an uninterrupted supply of appropriate and quality materials, tools, and equipment supports timely and efficient training delivery. Issues of selecting, storing and safe handling of Equipment, Machinery and supplies. The States may ensure sufficient budgetary allocations towards purchase of raw material, machinery, maintenance of machinery and equipment and to meet the contingency expenditure connected with training delivery.

g. First Aid Facility should made available in the Institute. It may be outsourced as per requirement.

h. Tie-up with Doctor/Clinic/Hospital is mandatory, this will help ITI's and trainers in cases of emergencies.

Annexure I: Salient features of NSQF

1. What Is The National Skills Qualification Framework?

Government of India has notified establishment of National skill qualification Framework (NSQF) through Gazette of India Extraordinary, Part 1, Section 2 Ministry of Finance (Department of Economic Affairs) Notification New Delhi the 27th December 2013. The National skills Qualification Framework (NSQF) organizes qualifications according to a series of levels of knowledge, skills and core skills and responsibility. This implies performance competence (deliverables) at work place. These levels are represented in terms of learning outcomes which the learner must possess regardless of whether they were acquired through formal, non-formal or informal learning.

2. Levels Description:

Each level of the NSQF is described by a statement of learning outcomes in five domains, known as level descriptors. These five domains are:

- i) Process
- ii) Professional knowledge
- iii) Professional skill
- iv) Core skill
- v) Responsibility

Existing course curricula was transformed into learning outcome/competency based curricula. The learning outcomes of particular trade defined were mapped with level descriptor of specific Level.

It has been decided to introduce NSQF in all courses under CTS. The details NSQF aligned curricula are available at www.cstaricalcutta.gov.in/syllabi.aspx. The training activities will be outcome based. It is the responsibility of the concerned trainer, principal, State Directorate/Management to ensure that students achieve the learning outcome and demonstrate competency according to assessment criteria.

Assessment would be carried out according to minimum assessment criteria as prescribed. Assessment criteria shall evolve with learning, must be transparent and known to trainees in advance. Indicative role & responsibilities of the stake holders are given below:

1) DGT

- i) Facilitate Horizontal and vertical mobility by interacting with other regulatory institutions/organizations.
- ii) Monitor & Coordinate with the State Govt. the implementation of courses.
- iii) Ensure timely fair, valid, reliable assessment and certification.
- iv) Formulation and updating testing procedure on continuous basis.
- v) Promote conducive & competitive environment in ITIs.
- vi) Notification to all stake holders and Govt. agency, prospective employers about the implementation of NSQF alignment of DGT courses for market acceptability.

2) Role of the State:

- i) Creation of NSQF implementation cell in the state and intra-regional level for effective and timely implementation
- ii) Providing infrastructure (if already short) and man power support to go ahead with the scheme for effective implementation.
- iii) Effective monitoring by suitable MIS mechanism
- iv) Organizing and supporting of training of trainers and officials through various programs in coordination with DGT.

3) Role of NSTIs:

- i) All the Principals/Regional Directors/HODs must ensure that their faculty is clear in concept and understanding of NSQF. They are equipped to support the implementation of NSQF if any state Directorate/ITI approach them.
- ii) All the ITOT programs, which are starting from August 2018, will be run and evaluated in NSQF format.
- iii) Each NSTI located in the particular region shall identify the entire requirement for initiating the implementation.
- iv) A nodal officer and a team of official at every NSTI will coordinate with the concerned State Directorate to provide all possible support to all the stake holders in the region.
- v) NSTI shall conduct awareness training programme to all stake holders like it is, industries, industry association, and state govt. officials through special training methodology including DLP.
- vi) NSTIs in which studios and hubs are located viz. NSTI Chennai and Mumbai shall organize and coordinate with others hubs and spokes in support with CSTARI and NIMI for dissemination of all information connected with NSQF.
- vii) NSTIs shall have a center in particular region to develop required skill and knowledge and core competencies in alignment with industry cluster/industry associations/MSMEs/Sector Skill Councils so as to provide hand-on skills/OJT/entrepreneurial qualities among trainers for improvement of learning ecosystem. For eg NSTI Chennai may have a centre for automobile sector, NSTI Bengaluru for IT/manufacturing, NSTI Mumbai for chemical and process industries, NSTI Hyderabad for production and manufacturing, NSTI Noida and NSTI Panipat for garment, apparel, cosmetology etc.
- viii) NSTIs should conduct basic training as BTP under ATS

The induction program could be the main vehicle for providing the key understandings and basic competences in preparing trainers for their professional teaching role. It is the initial teacher education programs to enable them to approach their teaching career with a solid pedagogic base.

For the development of professional competence, the key focus will be on the application of the most current and validated knowledge bases relating to human learning and how these can be systematically applied to the design of curriculum, teaching practices and assessment of learner performance.

Key Features

Title	Duration	Remarks
Induction	General: 2 weeks (Full Time)	<ul style="list-style-type: none"> • General orientation about present scenario and challenges of vocational education • Spectrum of duties and expectations in each role • Inculcation of holistic perception, professional values and ethical attitudes • Communication skills including interaction with students • Institutional management and general administration procedures • General rules of state concerned
	Technical: 4 weeks (Full Time)	<p>The induction programme to be designed to help ease new staff into their role as an ITI Trainer before they begin actual teaching. In this phase, they learn basic pedagogical knowledge and skills such as:</p> <ul style="list-style-type: none"> • Lesson Planning • Learner-centric approach • Entrepreneurship • Demonstration plan • Classroom Management • Designing for Active Learning • Basic Facilitation Skills • Micro teaching practices • Evaluation system
Using Technology for Teaching and Learning	5 weeks in block of every five years (Full Time)	<p>These workshops will focus on the core knowledge and skills needed to integrate the use of technology to improve teaching and learning outcomes. Key areas to be covered include:</p> <ul style="list-style-type: none"> • The useful affordance of using technology for teaching and learning • Key trends in using ICT for teaching and learning viz, computer-based teaching, computer assisted training, web based learning • Industrial field trainings for technological advancements • Designing an ICT based lesson • Useful tools and apps for teaching and learning

Specialized Workshops	Online	<p>Trainers participate in online workshops to help them hone and sharpen their pedagogical knowledge and skills. Trainers attend a variety of workshops such as</p> <ul style="list-style-type: none"> • Lesson Study Using Supported Experiments • Designing and Assessing Performance Based Assessment • Inquiry Based Learning • Facilitating Online Learning • Motivating Students
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The above sustainability guideline may be considered while preparing the sustainability guidelines/framework in respect of ITI ecosystem of States/ UTs. A State level Training manual for the next 10-15 years can be prepared in consultation with ITIs , Industry and other stakeholders including NSTI and other Organizations providing high end training keeping in view the State's Recruitment and Promotion rules of Crafts Instructors.

Competency Domains	Indicative Competencies
1. Curriculum Design and Development	<ul style="list-style-type: none"> • Design curriculum and lessons that align with the learning outcomes, students' learning needs and real-world/industry relevant context • Apply appropriate pedagogies and technologies in planning the curriculum • Enhance curriculum and lesson design through feedback
2. Facilitation of Learning	<ul style="list-style-type: none"> • Create learning environments that facilitate students' achievement of the learning outcomes • Facilitate learning experiences with elements of autonomy, mastery, relatedness to enhance the Intrinsic Motivation of students • Leverage technologies to design and facilitate a variety of ICT-enabled lessons • Create learning experiences that nurtures students' professional identity and formation.
3. Assessment For and Of Learning	<ul style="list-style-type: none"> • Design and implement formative and diagnostic assessments to improve student learning and achievement of learning outcomes • Design and implement summative assessment to record student achievement • Analyze student performance and provide support structures/mechanisms for feedback in the module/subject by leveraging on Edu Tech tools and learning analytics
4. Holistic Student Development	<ul style="list-style-type: none"> • Develop students' character, values, and social and emotional learning capacity • Provide basic pastoral care and career advisement
5. Dual Professionals	<ul style="list-style-type: none"> • Identify relevant developments in industry, disciplinary content and pedagogy to enhance the curriculum • Engage industry in developing students' skill sets and professional identity
6. Reflective Practitioners	<ul style="list-style-type: none"> • Engage in reflective practice through collaborative action research and professional learning communities

79179/2021/O/o DIR (NPIU)

A. Mapping of the existing competencies/qualifications of Administrator and Planners (ITI) and Identification of future training needs (Each selected State/SPIU to consolidate the information with respect to ITIs)

Sr. No .	Name and complete address of ITI	Name & Designation of Staff Member with date of joining	Qualification and Experience	Details of having completed mandatory CITS/Tentative date	Details of having completed NSQF compliant methodology/ Tentative date	Details of having attended Various STCs till 31/03/2021	Future Training needs Enlist names of courses
1.		1. Principal 2. Assistant Director 3. Deputy Director 4. Joint Director 5. Additional Director					

79179/2021/O/o DIR (NPIU)

B. Mapping of the existing competencies/qualifications of Crafts Instructors/Group

Instructors/Trainers and Identification of future training needs (Each selected State/SPIU to consolidate the information with respect to ITIs)

Sr. No.	Name and complete address of ITI	Name & Designation of Staff Member with date of joining	Qualification and Experience	Details of having completed mandatory CITS/Tentative date	Details of having completed NSQF compliant methodology/ Tentative date	Details of having attended Various STCs till 31/03/2021	Future Training needs Enlist names of courses
1.		1. Assistant Training Officer 2. Deputy Training Officer 3. Trainers 4. Any Other involved in teaching 5. Training and Placement Officer 6. Ministerial Staff					

Annexure IV: Checklist for Submission of Sustainability Plan by the States/UT's

Under STRIVE project, all the State/UT's will have to develop a sustainability plan for the recruitment, training and career progression for Craft Instructors ITI's/Trainers, preferably based on the aforesaid guidelines and submit the same to the MSDE along with checklist and relevant copies of documents on or before 30th April 2020.

Name of the State/Department:	
Date of Submission of the State Sustainability plan to the State Steering Committee(SSC) Please mention if the same has been approved along with copy of approval letter/MoM of SSC	
Sl. No	Description
1	Recruitment and Promotion Policy and a definite plan (Timeline) for recruitment of Assistant Training Officer (Craft Instructor), Deputy Training Officer (Group Instructor), and Principal, Training and Placement officer Support and Ministerial Staff and officers of ITI developed and notified by adopting the DGT guidelines. Please Attach relevant supporting documents (include service rules of the department showing compliance to the DGT regulations).
2	Training strategy, Career Progression Policy and a Training Calendar/definite plan for ITI instructors. Please Attach relevant supporting documents (include approved training calendar covering all trainers, strategy for compliance to induction program, adherence to CITS mandate and alignment with refresher training programs).
3	Improvement of working conditions of trainers developed and notified Please Attach relevant supporting documents.
Signature & Seal of Authorized Signatory	

Annexure V: CITS for craft instructors/recruitment of Crafts Instructor as per NCVT guidelines

For every unit in a trade, one of the instructor appointed should be with professional qualification as ITI pass-out with National Craft instructor Certificate (for trades where Craft Instructor Training courses was available) and one should be with professional qualification as degree/diploma, who will be trained in CITS in prescribed time as per following academic as well as technical qualification. The relevant experience post qualification is part of general instruction of every syllabus.

QUALIFICATION		Experience in trade relevant field after technical qualification
Academic	Technical	
Minimum 10 th class pass or equivalent	Four years Degree in Engineering/ Three years Diploma in appropriate branch of Engineering	One year for degree and two years for Diploma.
	National Apprenticeship Certificate in trade or National Trade Certificate in trade and National craft instructor certificate (for those trades where courses under Craft Instructor Training courses are available)	Three years for NAC/NTC

For instructors/trainers who are in service with at least three years of experience, the CITS may be carried out through RPL mode. A notification No. MSDE-18011/DGT/2017-TTC (Pt-III) dated 04th October 2018 has been released with detailed guidelines. The RPL certificate of CITS has been notified as equivalent to one-year regular CITS certificate through notification date 26th July 2019.

Annexure VI: Illustrative list of courses mapped with CTS trades

Sl. No.	Trade	Course Name
1.	Fitter	1. Linear and Angular Measurement
		2. measurement using Co-ordinate Measuring Machine and Roundness Measuring Machine
		3. CNC Programming & Operation Turn Mill Center
2	Mechanic Motor Vehicle	1. Servicing and Testing of Electrical Unit of Petrol Engine
		2. Servicing and overhauling of Diesel Vehicle
		3. Basic Petrol or Diesel Engine
3	Electrician	1. Refresher Course on Repair and Maintenance of Domestic appliances
		2. Power Electronics and Static Control of Motors
		3. Electronics for Electrical and Electronic Instructors
4	Mechanic Electronics	1. Digital Electronics and its Applications
		2. Electronic For Electrical And Electronic Instructor
		3. Fundamentals of Electronics and Computers
5	Plumber	1. Modern Teaching Techniques and use of teaching aids
		2. Refresher course on Plumbing
		3. Refresher course on Sanitation
		i. Automation of plumbing network through IoT (deployment of sensors)
6	Draughtsman Civil	1. Auto CAD(2D& 3D)
		2. CAD-03(2D Drafting & 3D Modeling using Auto CAD)
		3. Refresher Course on Advance Architecture
7	Sewing Technology	1. Refresher Course on Dress Making and Cutting and Sewing
		2. Operation on Special Industrial Sewing Machines
		3. Fundamentals of Garment Technology
		4. Apparel design and manufacturing through Optitex/CAD/CAM
8	COPA	1. Accounting with Tally
		2. Computer Networking and Administration
		3. Multimedia and Web Page Designing
		4. Instructional delivery through deployment of technologies such as Video Conferencing, Distance learning program (DLP), Direct to home (DTH) etc.
9	Turner	1. Programming & Operation on CNC Lathe (Fanuc Series of Mate TC)

Sl. No.	Trade	Course Name
		2. Quality Engineering
		3. CNC Programming and Simulation
		4. Operation of Direct Numerically Controlled (DNC) machines
		5. Operation of Flexible Manufacturing System (FMS) machines
10	Machinist	1. Programming & Operation on CNC Lathe (Fanuc Series of Mate TC)
		2. Quality Engineering
		3. CNC Programming and Simulation
		4. DNC/FMS/IoT based Automation
11	Welder	1. TIG Welding
		2. Spot Welding
		3. Pipe Welding by Ark
		4. FMS
		i. Robotics
12.	Electrician and Electronics	1. Solar Technologist
		2. Smart Agriculture through IoT
		3. Non-conventional energy resources
		4. Power System and transmission
		5. Grid based remote access and fault location
		6. Virtual Instrumentation
		7. Wind mill technologies
13.	Mechanic Machine Tool Maintenance (MMTM)	1. Machine tool maintenance
		2. Condition Monitoring
		3. Preventive and Critical Maintenance
		4. Total Productive Maintenance including 5-S
		5. Failure Analysis
		6. Hydraulic and Pneumatics
		7. Usage of Electric/Programmable Logic Control (PLC) based systems
		8. Modular concept of Hydraulic, Pneumatics and Electric systems
		9. Artificial Intelligence and usage of smart tools in manufacturing

Note: The list is just indicative and any number of courses of similar nature may be amended.