

Training on NSQF implementation manual

Objectives: At the end of this lesson you shall be able to

- **define the terms applicable to NSQF**
- **state the features of national skills qualification, its level descriptors and key elements**
- **explain, how NSQF is implemented in ITI/CTS and instruction for trainees**
- **describe the assessment guidelines in training process**
- **describe the ten levels of NSQF and their explanation.**

Few terms are used very frequently in this manual. They are clarified from NCVT point of view.

- **Competence** means the proven ability to use acquired knowledge, skills, personal and social abilities, in discharge of responsibility roles in a given environment/situation.
- **Learning Outcomes** represents what a learner knows, understands and is able to do on completion of a learning process, and which would be expressed in terms of knowledge, skills, and competence.
- **Assessment criteria** states what is to be assessed in the required level of performance of activity. These are defined against each Learning Outcomes.
- **“Credit”** is a recognition that a learner has successfully completed with a prior course of learning, corresponding to a qualification at a given level.
- **“Knowledge”** means the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study. Knowledge is described as theoretical and/or factual.
- **“Learner”** refers to an individual undergoing skill development training, whether in a formal or informal setting.
- **“National skills qualifications committee”** or **“NSQC”** refers to the committee set up in accordance para 14. (i).
- **“Qualification”** means a formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards.
- **“Recognition of prior learning”** or **“RPL”** is the process of recognising previous learning, often experiential, towards gaining a qualification.
- **“Sector”** means a grouping of professional activities on the basis of their main economic function, product, service or technology.

- **“Skills”** means the ability to apply knowledge and use know-how to complete tasks and solve problems. Skills are described as cognitive (involving the use of logical, initiative and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments);
- **“Trainer”** means someone who trains, instructs, teaches or otherwise enables the learner(s) to acquire the appropriate knowledge and skills
- **“Training provider”, “Institute” and “Institution”** refer to any organisation providing knowledge and skills to learners.

Introduction of NSQF

Government of India has notified establishment of National Skill Qualification

The NSQF shall be anchored by the National Skill Development Agency (NSDA) and will be implemented through the National Skills Qualification Committee (NSQC).

NSQC shall approve qualifications and maintain Qualification Register.

What is the national skills qualification frame-work?

The National Skills Qualification Framework (NSQF) organizes qualifications according to a series of levels of knowledge, skills and core skills and responsibility.

The levels of a framework indicate different degrees of complexity of the learning outcomes.

The lowest level often define the basic generic or vocational skills for people who can work effectively under supervision.

The central levels typically define the expected requirements for professional who can act independently..

The highest levels emphasize the capacity to analyses and innovate, create new knowledge and may include the ability to lead and manage people and processes.

Level descriptors

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

These five domains are:

- a Process
- b Professional knowledge
- c Professional skill
- d Core skill
- e Responsibility

The key elements of the NSQF provide

- National principles for recognising skill proficiency and competencies at different levels leading to international equivalency.
- Multiple entry and exit between vocational education, skill training, general education, technical education and job markets.
- Progression pathways defines within skill qualification framework.
- Opportunities to promote lifelong learning and skill development.
- Partnership with industry/employers
- A transparent, accountable and credible mechanism for skill development across various sectors.
- Increased potential for recognition of prior learning.

The NSQF level descriptors along with explanation are detailed in the link <http://www.NSQFimplementationmanual>

NSQF Implementation in ITI/CTS

It has been decided to introduce NSQF in all courses under CTS. The details of 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 outcomes 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:

A NCVT

- 1 Facilitate Horizontal and Vertical mobility by interacting with other regulatory institutions/ organizations.
- 2 Monitor & Coordinate with the State Govt for the implementation of courses
- 3 Ensure timely fair, valid, reliable assessment and certification.
- 4 Formulation and updating testing procedure on continuous basis.
- 5 Promote conducive & competitive environment in ITIs.
- 6 Notification to all stake holders and govt. agency, prospective employers about the implementation of NSQF alignment of NCVT courses for market acceptability.

B Role of the state

- 1 Creation of NSQF implementation cell in the state and intra-regional level for effective and timely implementation
- 2 Providing infrastructure (if already short) and manpower support to go ahead with the scheme for effective implementation
- 3 Effective monitoring by suitable MIS mechanism
- 4 Organizing and supporting of training of trainers and officials through various programmes in coordination with DGT.

C Role of CFIs

- 1 All the Principals/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.
- 2 All the ITOT programs, which were started in August 2018, will be run and evaluated in NSQF format.
- 3 Each CFI located in the particular region shall identify the entire requirement for initiating the implementation.
- 4 A nodal officer and a team of officials at every CFI will coordinate with the concerned State Directorate to provide all possible support to all the stake holders in the region.
- 5 CFI shall conduct awareness training programme to all stake holders like ITIs, industries, industry association, and State govt. officials through special training methodology including DLP.

- 6 CFIs in which studios and hubs are located viz. NSTI Chennai and Mumbai shall organize and coordinate with other hubs and spokes in support with CSTARI and NIMI for dissemination of all information connected with NSQF.

Instruction for trainers

The Principal of the concerned ITI shall act as the chief coordinator of the training programme and will ensure effective implementation of the course.

He/ She shall ensure that trainers/ faculty are able to deliver the learning objectives. The Trainer/ Instructor will impart knowledge of the Professional Knowledge, Professional Skill and Core Skill in their respective trades. The performance appraisal of Trainer/ Instructor shall be linked to delivery of quality outputs.

The Learning Outcomes of each trade are broadly categorized in two parts. They are Generic Learning Outcome and Specific Learning Outcomes. The Generic Learning Outcomes are generic in nature covering components of Workshop Science & Calculation, Engineering Drawing & Employability Skill and are not trade specific whereas Specific Learning Outcomes are trade specific.

The lesson plan/ demonstration plan may be drawn with respect to each Learning Outcomes. The training on skill and knowledge components must be planned and imparted in such way that the trainees are able to execute each Learning outcome as per defined Assessment Criteria.

The delivery of the training shall be planned in such a way that at the end of the training, all the trainees are in a position to demonstrate competencies as per assessment criteria defined. The assessment of trainees shall be continuous process and on completion of each learning outcomes necessary records / evidence to be preserved by the concern instructor.

Internal assessment of the performance of students will be done by the instructor of concern ITI in a continuous comprehensive manner. The NCVT will conduct external competency based assessment/examination of skills & knowledge of the trainees.

The examination will be conducted by NCVT to test basic skills on Workshop Science & Calculation, Engineering Drawing and Employability Skills as per NCVT guidelines apart from Professional Skill and Professional Knowledge. However, their applications will also be assessed during execution of specific learning outcomes.

Conducting training

In order to achieve defined learning outcome by the trainee, the trainers may adopt following flow chart: Refer page No. 5.

Note: As indicated by arrow lesson plans would be developed from top to bottom but training will be conducted from bottom to top.

Types of assessment to be adopted

- A Formative Assessment
- B Summative Assessment

A Formative Assessment

The Trainer shall prepare a report for every assessment observation and a copy of this will be placed as evidence in the candidate's portfolio. The types of evidence are as follows:

- Assessor's Observation reports
- Job piece/ output of the Practical exercise/ Assignments/Project Reports along with their appropriate Evaluation documents/Check list.
- Theory written test.
- Result of written or oral Questioning/Viva-voice, conducting interviews and questionnaires.
- Direct Performance Observation
 - At the work place/Laboratory/Workshop
 - Simulated Work Environment
- Participation in Group activity/competition
- Trainee Portfolio maintained by trainee (to include collection of work samples, written documents, Photograph/video of trainee doing actual work in the institute.)

Evidence of internal assessment to be preserved until forthcoming examination for audit and verification by examination body.

B Summative Assessment

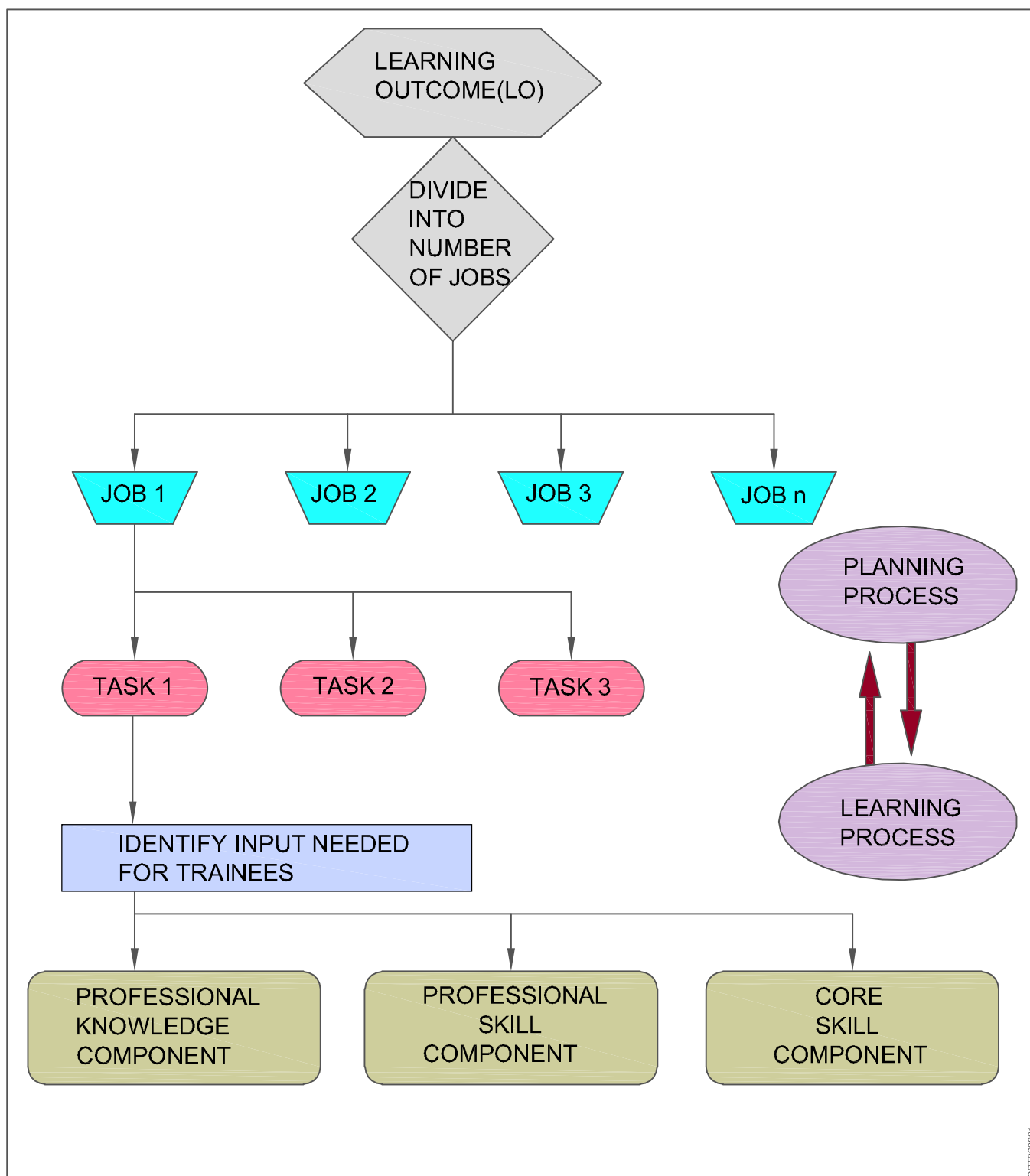
The Summative Assessment is to be carried out for Theory & Practical as prescribed by NCVT. The Trainee will be eligible for summative assessment after completion of all the formative Assessments, in addition to requirement of 80% attendance.

Assessment Guidelines

Principles assessment

Assessment is central to the recognition of achievement and the quality of the assessment is therefore important to provide credible certification credibility in assessment which is assured through assessment procedures and practices being governed by certain principles

Analysis of Training process



The AITT examination takes place as per notification issued from NCVT time to time. Each examination encompasses skills as listed for that period of training including theoretical knowledge, Core skills & Employability Skills. Employability Skills will be covered in the first year only.

Theory tests

Much of theoretical knowledge will be tested during practical. However, the theory test is considered necessary to assess the knowledge, which is essential for a person to do the job. The examination pattern and marks will be as per NCVT guidelines issued from time to time.

Practical tests

- Trainees will carry out the assigned exercises as per question papers supplied by NCVT.
- The External Examiner/assessor will verify every trainee portfolio and Marks will be Awarded.
- Evaluation of the practical test will be carried out by the External Examiner/assessor according to the Marking Instructions/guidelines issued by NCVT.
- Evidence of external assessment would also be preserved by Institute/State Director, which can be verified by NCVT representative.

Broadly candidates are to demonstrate that they are able to

- 1 Read & interpret technical parameters/documentation, plan and organize work processes, identify necessary materials and tools;
- 2 Perform task with due consideration to safety rules, accident prevention regulations and environmental protection stipulations;
- 3 Apply professional knowledge, core skills & employability skills while performing the task.
- 4 Check the job as per drawing/assembly for functioning, identify and rectify errors in job/assembly.
- 5 Document the technical parameters related to the task undertaken.

For the purposes of determining the overall result, weightage of 100% is applied for six months and one year duration courses and 50 % weightage is applied to each examination for two years courses. The minimum pass percent for Practical is 60% & minimum pass percent for Theory subjects 40%.

The following marking pattern to be adopted while assessing

- a Weightage in the range of 60-75% to be allotted during assessment under following performance level

For performance in this grade, the candidate with occasional guidance showing due regard for safety procedures and practices, has produced work which demonstrates attainment of an acceptable standard of craftsmanship.

In this work there is evidence of

- demonstration of good skill in the use of hand tools, machine tools and workshop equipment

- below 70% tolerance dimension / accepted limit achieved while undertaking different work with those demanded by the component/job.
 - a fairly good level of neatness and consistency in the finish
 - occasional support in completing the project/job.
- b Weightage in the range of above 75% - 90% to be allotted during assessment under following performance level

For this grade, the candidate, with little guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of a reasonable standard of craftsmanship.

In this work there is evidence of

- good skill levels in the use of hand tools, machine tools and workshop equipment
 - 70-80% tolerance dimension / accepted limit achieved while undertaking different work with those demanded by the component/job.
 - a good level of neatness and consistency in the finish
 - little support in completing the project/job
- c Weightage in the range of above 90% to be allotted during assessment under following performance level

For performance in this grade, the candidate, with minimal or no support in organization and execution and with due regard for safety procedures and practices, has produced work which demonstrates attainment of a high standard of craftsmanship.

In this work there is evidence of

- high skill levels in the use of hand tools, machine tools and workshop equipment
- above 80% tolerance dimension/ accepted limit achieved while undertaking different work with those demanded by the component/job.
- a high level of neatness and consistency in the finish.
- minimal or no support in completing the project

Recording the Assessment: All the relevant evidence to be preserved till the examination is over and marks allotted to each trainee against the Learning Outcomes are to be recorded.

Refer module 3.1 for the NSQF Levels with descriptors.