

NSQF and implementation in vocational training

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

- define NSQF
- state the objectives and key element of NSQF
- list and state the NSQF levels and their descriptor
- state the approach of implementation of NSQF in vocational training.

NSQF

The National Skills Qualifications Framework (NSQF) is a competency-based framework that organises all qualifications according to a series of levels of knowledge, skills and aptitude.

Objectives of NSQF

The objectives of the NSQF are to provide a framework that:

- Accommodates the diversity of the Indian education and training systems
- Allows the development of a set of qualifications for each level, based on outcomes which are accepted across the nation
- Provides structure for development and maintenance of progression pathways which provide access to qualifications and assist people to move easily and readily between different education and training sectors and between those sectors and the labour market
- Gives individuals an option to progress through education and training and gain recognition for their prior learning and experiences
- Underpins national regulatory and quality assurance arrangements for education and training
- Supports and enhances the national and international mobility of persons with NSQF compliant qualifications through increased recognition of the value and comparability of Indian qualifications

The NSQF is a quality assurance framework it facilitates the awarding of credit and supports credit transfer and progression routes within the Indian education and training system. It seeks to help everyone involved in education and training to make comparisons between qualifications offered in the country, and to understand how these relate to each other.

National skills qualification framework: (Resource: Govt. Gazette)

The National Skills Qualification Framework (NSQF) organises qualifications according to a series of levels of

knowledge, skills and aptitude. These levels are defined in terms of learning outcomes which the learner must possess regardless of whether they were acquired through formal, non-formal or informal learning. In that sense, the NSQF is a quality assurance framework. It is, therefore, a nationally integrated education and competency based skill framework that will provide for multiple pathways, horizontal as well as vertical, both within vocational education, vocational training, among vocational education, vocational training, general education and technical education, thus linking one level of learning to another higher level. This will enable a person to acquire desired competency levels, transit to the job market and, at an opportune time, return for acquiring additional skills to further upgrade their competencies.

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 defined 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 qualification framework is beneficial to schools, vocational education and training providers, higher education institutes, accrediting authorities as well as industry and its representative bodies, unions, professional associations and licensing authorities. The biggest beneficiaries of such a framework are the learners who can judge the relative value of a qualification at a particular level on the framework and make informed decisions about their career progression paths.

International experience with qualification frameworks:

A paradigm shift from education based on inputs towards education based on learning outcomes is taking place. Outcomes-based learning is a widely used term. The shift to learning outcomes is important for a number of reasons:

- It shifts focus from providers to users of education and training.
- By explaining what a learner is expected to know, understand or be able to do at the end of a learning process, individuals are better able to see what is offered in a particular course and how this links with other courses and programs.
- It increases transparency and strengthens accountability of qualifications for the benefit of individual learners and employers.
- The vast majority of the world's industrialised and transition countries are reforming their qualifications, while at the same time developing frameworks to relate these qualifications to each other and to generally reflect new demands in society and the labour market.
- The development of these systems is often linked to changes in higher education, technical & vocational education and training (TVET) and lifelong learning.

Many countries worldwide are in the process of introducing qualification frameworks. Though the theoretical principles of all frameworks remain largely similar, the objectives of launching the frameworks vary. Whether the emphasis is on increasing the relevance and flexibility of education and training programs, easing recognition of prior learning, enhancing lifelong learning, improving the transparency of qualification systems, creating possibilities for credit accumulation and transfer, or developing quality assurance systems, Government are increasingly turning to qualifications frameworks as a policy tool for reform. In some cases national developments are propelled by the emergence of regional frameworks (such as the European Qualification Framework). In many cases the implementation of qualification frameworks has been widely supported by international organisations and is often linked to aid money and even loans. There is increasing activity from international agencies in the area of qualifications frameworks: the Organisation for Economic Cooperation and Development (OECD), the International Labour Office (ILO), the World Bank (WB) and the European Union (EU) have current qualification framework projects.

Background of development of qualification framework in India

Through the National Policy on Skill Development, 2009, India recognised the need for the development of a national qualification framework that would transcend both general education and vocational education and training. The Policy envisioned that the framework will stimulate and support reforms in skills development and facilitate

establishment of nationally standardized and acceptable, and internationally comparable qualifications. In the absence of an organisation at the central level to develop such a framework, individual ministries started working on development of the framework, which were to subsequently be subsumed in the National framework, when available. The Ministry of Labour and Employment developed the National Vocational Qualifications Framework (NVQF) and the Ministry of Human Resource Development developed the National Vocational Educational Qualification Framework (NVEQF). The Ministry of Human Resource Development also launched a pilot of the NVEQF in Haryana at the secondary school level.

Realizing the need to have a unified framework, an Inter-Ministerial Committee was formed by the Cabinet Secretariat to use the work already done by the two Ministries as the foundation of the National Skills Qualification Framework. With the formation of the National Skill Development Agency, the mandate to anchor and operationalise the NSQF to ensure that quality and standards meet sector specific requirements was transferred to the Agency.

Need for qualification framework in India

In India, general education and vocational education & training have been operating as separate verticals, with very little interaction between the two. This has led to hesitation amongst the youth in opting for vocational education and training as it is presumed that this avenue would preclude the concerned individual from being able to acquire higher degrees and qualifications. In order to facilitate mobility from vocational to general education, and vice-versa, a qualification framework for India, i.e. the National Skill Qualification Framework (NSQF) will help make qualifications more understandable and transparent.

The need for the NSQF arises due to the following additional reasons:

- Till now the focus of education and training has been almost entirely on inputs. The NSQF is based on an outcomes-based approach, and each level in the NSQF is defined and described in terms of competency levels that would need to be achieved. Job roles corresponding to each of these competency levels would be ascertained with the involvement of industry, through the respective Sector Skill Councils (SSCs).
- Pathways of learning and progression, especially on the vocational education and training front, are generally unclear or absent. There is no clear provision for vertical or horizontal mobility. The NSQF will make the progression pathways transparent so that institutes, students and employers are clear as to what they can or cannot do after pursuing a particular course and address the issues of inequity and disparity in qualifications

- There is lack of uniformity in the outcomes associated with different qualifications across institutions, each with its own duration, curriculum, entry requirements as well as title. This often leads to problems in establishing equivalence of certificates/diplomas/degrees in different parts of the country, which in turn impacts the employability and mobility of students
- The negative perception associated with vocational education and training can be significantly removed by the development of quality qualifications that also permit acquisition of higher qualifications, including degrees and doctorates
- There exist a large section of people who have acquired skills in the informal sector but who do not have the necessary formal certifications to attest to their skills. As a competency-based and outcomes based qualification framework, NSQF will facilitate Recognition of Prior Learning (RPL) that is largely lacking in the present education and training scenario
- Majority of Indian qualifications are not recognised internationally and vice-versa. This creates a problem for the students and workers as their international mobility is adversely affected and they often have to undergo a course again to get a qualification that is recognised in the host country. The NSQF will also help alignment of Indian qualifications to international qualifications in accordance with relevant bilateral and multilateral agreements. Many countries are already in the process of aligning their qualifications to international qualifications through qualification frameworks
- The credit accumulation and transfer system that will be integrated in the NSQF will allow people to move between education, vocational training and work at different stages in their lives according to their needs and convenience. It will be possible for a student to leave education domain, get some practical experience in industry and return to studies to gain qualifications to progress higher in his chosen career.

Level descriptors

- Each level of the NSQF is associated with a set of descriptors made up of five outcome statements, which describe in general terms, the minimum knowledge, skills and attributes that a learner needs to acquire in order to be certified for that level.
- Each level of the NSQF is described by a statement of learning outcomes in five domains, known as level descriptors. These five domains are:
 - Process
 - Professional knowledge,
 - Professional skill,
 - Core skill and
 - Responsibility.

Each of these is briefly described below:

• Process

- Process is a general summary of the other four domains corresponding to the level.
- It is implemental in all activities of vocational trainer.

• Professional knowledge

- Professional knowledge is what a learner should know and understand with reference to the subject. It is described in terms of depth, breadth, kinds of knowledge and complexity, as follows:
 - Depth of knowledge can be general or specialised
 - Breadth of knowledge can range from a single topic to multi-disciplinary area of knowledge
 - Kinds of knowledge range from concrete to abstract, from segmented to cumulative
 - Complexity of knowledge refers to the combination of kinds, depth and breadth of knowledge.
- This domain is implemented in RT lesson/ vocational trainer.

• Professional skill

Professional skills are what a learner should be able to do. These are described in terms of the kinds and complexity of skills and include:

- Cognitive and creative skills involving the use of intuitive, logical and critical thinking.
- Communication skills involving written, oral, literacy and numeracy skills.
- Interpersonal skills and generic skills.
- This domain is implemented in practical exercises in vocational training.

• Core skill

Core skills refer to basic skills involving dexterity and the use of methods, materials, tools and instruments used for performing the job, including IT skills needed for that level.

This domain is implemented in workshop science, engineering drawing, employability skill.

• Responsibility

Responsibility aspect determines the following:

- Nature of working relationships.
- Level of responsibility for self and others.
- Managing change.
- Accountability for actions.
- This domain is also implemented for all learn and trainer activity in vocational training.

- The descriptors give broad, general, but meaningful, indicators of the learning outcomes at each level. The descriptors can be used in a number of ways:
 - To allocate levels to learning programs and qualifications.
 - In validation and moderation of various qualifications and programs.
 - As a basis for communication with learners and other users of qualifications.

- As a guide for mapping progression routes within and across the education and training sectors.
- By program designers when making entry requirements and recommendations for programs

The, given below table states 10 level but in all only 5 levels are accomplished for craftsman training under vocational training scheme.

The NSQF level with descriptors are given below for vocational training in ITI's

Level	Process required	Professional knowledge	Professional Skill	Core Skill	Responsibility
Level 1	Prepares person to/carry out process that are repetitive on regular basis require no previous practice	Familiar with common trade terminology, instructional words meaning and understanding	Routine and repetitive, takes safety and security measures	Reading and writing, addition, subtraction personal financing, familiarity with social and religious diversity, hygiene and environment	No responsibility always works under continuous instruction and close supervision
Level 2	Prepares person to/carry out process that are repetitive on regular basis with little application of understanding, more of practice	Material tools and application in a limited context, understands, context of work and quality	Limited service skill used in limited context, select and apply tools, assist in professional works with no variables differentiates good and bad quality	Receive and transmit written and oral messages, basic arithmetic personal financing understanding of social political and religious diversity, hygiene and environment	No responsibility works under instruction and close supervision
Level 3	Person carry put a job which many require limited range of activities routine and predictable	Basic facts, process and principle applied in trade of employment	Recall and demonstrate practical skill, routine and repetitive in narrow range of application	Communication written and oral, with minimum required clarity, skill of basic arithmetic and algebraic principles, personal banking, basic understanding of social and natural environment	Under close supervision Some Responsibility for work within defined limit

Level	Process required	Professional	Professional Skill	Core Skill	Responsibility
Level 4	Work in familiar, predictable, routine, situation of clear choice	Factual knowledge of field of knowledge of study	Recall and demonstrate practical skill, routine and repetitive in narrow range of application, using appropriate rule and tool, using quality concepts	Language to communicate written or oral, with required clarity, skill to basic arithmetic and algebraic principles, basic understanding of social political and natural environment	Responsibility for own work and learning
Level 5	Job that requires well developed skill, with clear choice of procedures in familiar context	Knowledge of facts, principles, process and of general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Desired mathematical skill, understanding of social, political and some skill of collecting and organising information communication	Responsibility for own work and learning and some responsibility for other's works and learning
Level 6	Demands wide range of specialised technical skill, clarity of knowledge and practice in broad range of activity involving standard non standard practices	Factual and theoretical knowledge in broad contexts within in field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Reasonably good in mathematical calculation, understanding of social, political and, reasonably good in data collecting organising information and logical communication	Responsibility for own work and learning and full responsibility for others works and learning
Level 7	Requires a command of wide ranging specialised theoretical and practical skill, involving variable routing and non-routine	Wide ranging factual and theoretical knowledge in broad contexts within a field of work or study	Wide range of cognitive and practical skills required to to generate solutions to specific problems in a field of work or study	Good logical and mathematical skill understanding of social political and natural environment good in collecting and organising information, communication and presentation skill	Full responsibility for output of group and development
Level 8	Comprehensive, cognitive, theoretical knowledge and practical skills to develop creative solutions, to abstract problem. Undertakes self study, demonstrates intellectual independence, analytical rig our and good communication			Exercise management and supervision in the context of work/study having unpredictable changes, responsible for development of self and others	
Level 9	Advanced Knowledge and skill Critical understanding of the subject, demonstrating mastery and innovation, completion of substantial research and dissertation			Responsible for decision making in complex technical activities, involving unpredictable study/work situations	
Level 10	Highly specialised knowledge and problem solving skill to provide original contribution to knowledge through research and scholarship			Responsible for strategic decisions in unpredictable complex situations of work/study	