



NATIONAL COMPETENCY STANDARDS FOR POLYMERS LOOM OPERATOR

**Department of Occupational Standards
Ministry of Labour and Human Resources
Thimphu, Bhutan.**



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FOREWORD

The Department of Occupational Standards of the Ministry of Labour and Human Resources proudly presents National Competency Standards (NCSs) for Polymers Loom Operator as part of TVET reform initiative for improving the quality of Vocational Education and Training System in Bhutan. The standards represent the fruits of hard work and invaluable experiences gained by the department since its establishment in the latter half of 2003. The main aim of developing Competency Standards is to set up a well defined nationally recognized Vocational Qualification and Certification system that will help set a benchmark for the Technical Vocational Education and Training (TVET) System in our country aligned to international best practices.

Competency Standards is one of the base pillars in the Bhutan Vocational Qualification Framework (BVQF) and is the first step in its implementation. The standards are developed to ensure that employees or vocational graduates possess and acquire the desired skills, knowledge and attitude required by industries and employers. In order to ensure this close match in supply and demand of skills, knowledge and attitude, standards have been developed in close consultation and partnership with industry experts and validated by the Technical Advisory Committees for the concerned economic sectors.

A vocational education and training system based on Competency Standards shall ensure that delivered training is of a high quality and relevant to the needs of the labour market. As a result, future TVET graduates will be better equipped to meet the need and expectations of industries and employers. This positive impact on the employability of TVET graduates will enhance the reputation of vocational education and training and make it attractive to school leavers.

While acknowledging the existing level of cooperation and collaboration, the ministry earnestly requests employers and training providers to extend the fullest support and cooperation in implementing the National Competency Standards. The ultimate objective is to build a competent and productive national workforce that will contribute to the continued socio-economic progress of our country.

I gratefully acknowledge the valuable contributions made by experts from industries during the consultation, verification and validation processes of the standards. I look forward to improved engagement and active participation of the industry and employers in the development of a quality assured demand driven TVET system in the near future.

Nima Sangay Tshempo

Minister

Ministry of Labour and Human Resources

INTRODUCTION

A. National Competency Standards (NCS)

Competency Standards specify the skill, knowledge and attitudes applied to a particular occupation. Standards also specify the standards or criteria of performance of a competent worker and the various contexts in which work may take place. Standards provide explicit advice to assessors regarding the skill and knowledge to be demonstrated by candidates seeking formal recognition either following training or through work experience.

Purpose of National Competency Standards

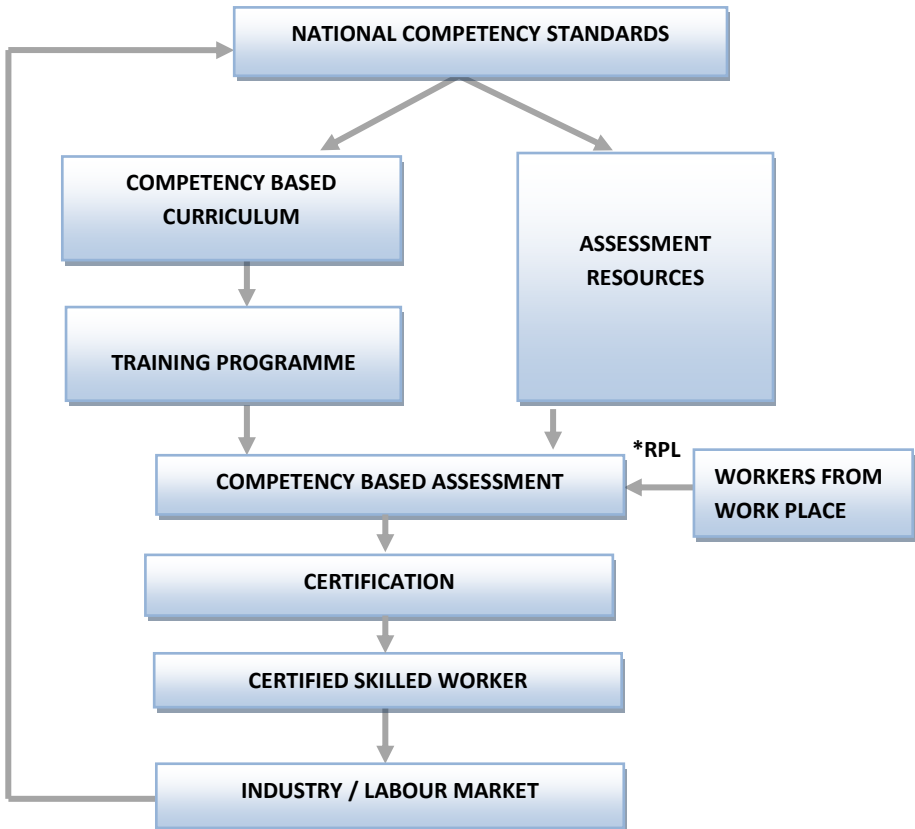
National Competency Standards serve a number of purposes including:

- Providing advice to curriculum developers about the skill and knowledge to be included in curriculum.
- Providing specifications to assessment resource developers about the skill, knowledge and attitudes within an occupation to be demonstrated by candidates.
- Providing advice to industry/employers about job functions, which in turn can be used for the development of job descriptions, performance appraisal systems and work flow analysis.

B. Bhutan Vocational Qualification Framework (BVQF)

Bhutan Vocational Qualifications Framework is an agreed system of Assessing, Certifying and Monitoring nationally recognized qualifications for all learning in the TVET sector against national standards, in training institutions, in the workplace, in schools or anywhere where learning takes place.

Components of the Bhutan Vocational Qualification Framework (BVQF)



* RPL = Recognition of Prior Learning

BVQF Levels

The Bhutan Vocational Qualification Framework has three levels classified based on the competency of the skilled workers. The three levels are:

- National Certificate Level 3 (NC III)
- National Certificate Level 2 (NC II)
- National Certificate Level 1 (NC I)

BVQF Level Descriptors

The qualification levels are decided based on level descriptors. The detail of the qualification level descriptor is as follows:

National Certificate Level 1

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none">• Are narrow in range.• Are established and familiar.• Offer a clear choice of routine responses.• Involve some prioritizing of tasks from known solutions.	<ul style="list-style-type: none">• Basic operational knowledge and skill.• Utilization of basic available information.• Known solutions to familiar problems.• Little generation of new ideas.	<ul style="list-style-type: none">• In directed activity.• Under general supervision and quality control.• With some responsibility for quantity and quality.• With no responsibility for guiding others.

National Certificate Level 2

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"> • Require a range of well developed skills. • Offer a significant choice of procedures requiring prioritization. • Are employed within a range of familiar context. 	<ul style="list-style-type: none"> • Some relevant theoretical knowledge. • Interpretation of available information. • Discretion and judgments. • A range of known responses to familiar problems 	<ul style="list-style-type: none"> • In directed activity with some autonomy. • Under general supervision and quality checking. • With significant responsibility for the quantity and quality of output. • With some possible responsibility for the output of others.

National Certificate Level 3

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"> • Requires a wide range of technical or scholastic skills. • Offer a considerable choice of procedures requiring prioritization to achieve optimum outcomes. • Are employed in a variety of familiar and unfamiliar contexts. 	<ul style="list-style-type: none"> • A broad knowledge base which incorporates some theoretical concepts. • Analytical interpretation of information. • Informed judgment. • A range of sometimes innovative responses to concrete but often unfamiliar problems. 	<ul style="list-style-type: none"> • In self-directed activity. • Under broad guidance and evaluation. • With complete responsibility for quantity and quality of output. • With possible responsibility for the output of others.

PURPOSE

This qualification is designed for people interested in a career as Polymers Loom Operator.

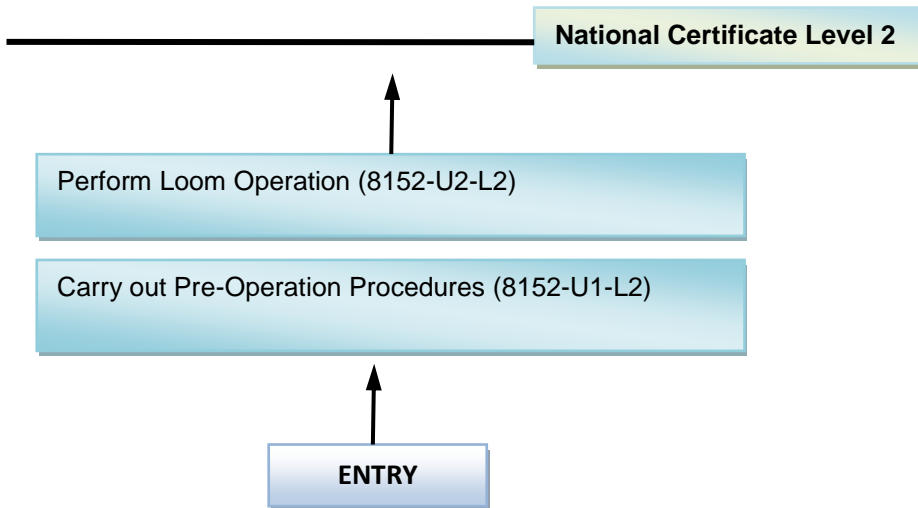
The qualifications for Polymers Loom Operator start from Level 2. It comprises of two units; perform pre-operation procedures and Perform Loom operation. These are essential knowledge and skills required for Loom operator and this qualification prepares people for entry into the National Certificate Level 3.

The National Certificate in Loom Operator Level 2 is currently the final achievement in this qualification pathway. Candidates wishing to be admitted into higher level must hold the National Certificate in Loom Operator Level 2.

The Level 3 qualification recognizes the skills and knowledge required for people working as a highly skilled Loom Operator and builds on the skills and knowledge that candidates will have gained through the successful completion of the Level 2 certificate.

A diagram of the qualification pathway will be as follows.

PACKAGING OF QUALIFICATION FOR POLYMERS LOOM OPERATOR



CODING USED FOR COMPETENCY STANDARDS

The coding and classification system developed in Bhutan is logical, easy to use, and also aligned with international best practises. The Bhutanese coding and classification system is based on the International Standard Classification of Occupations, 2008 (ISCO-08) developed by the International Labour Organisation (ILO).

The coding of the National Competency Standards forms the basis of the identification code for the Vocational Education and Training Management Information System (VET – MIS) both in terms of economic sector identification and that of the individual standard.

Coding the individual unit of Competency Standard

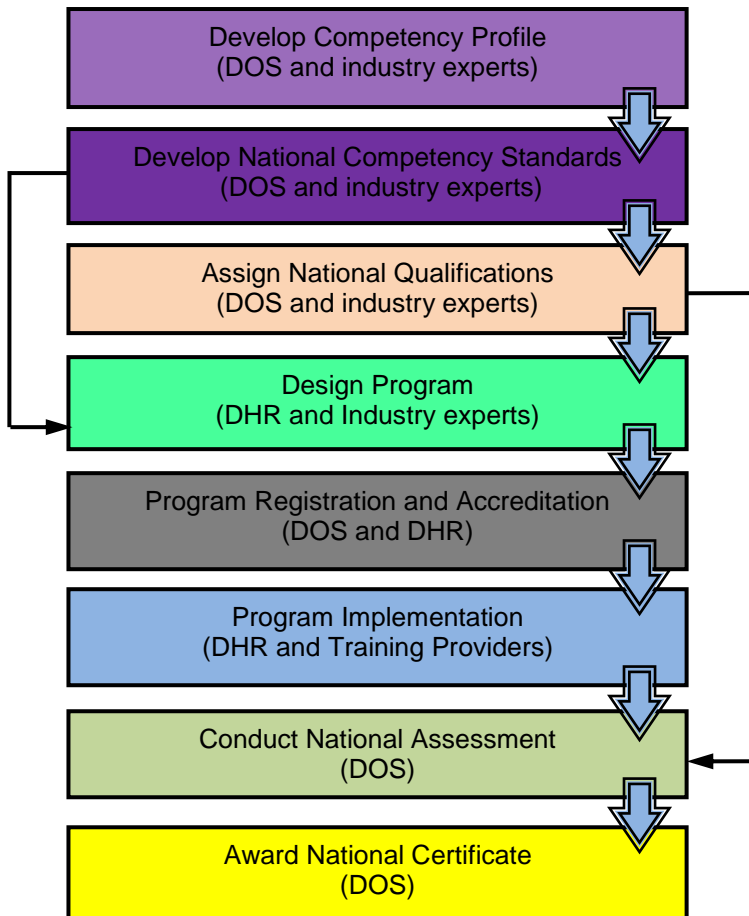
Coding the individual units of Competency Standard has a multiple purpose:

- to identify the level,
- to identify to which qualification level the standard belongs,

A job can include a number of competencies described in the Competency Standards.

To illustrate with an example, the ILO assigns the code 8152 to the occupation textile and weaving. Therefore, in the Bhutan's context, the occupation Loom Operator has been assigned the code 8152 in the National Coding System. The first unit is assigned the code U1, the first Unit of National Competency Standard is designated the code 8152 U1. Levels are assigned the code L and follow a logical progression from the National Certificate Level 1 (NC I) to the National Certificate Level 3 (NC III). Therefore the National Certificate Level 3 is assigned the code L3.

Implementation and operational procedures for Competency Standards (CS)



Key:

MoLHR – Ministry of Labour and Human Resources

DHR – Department of Human Resources

DOS – Department of Occupational Standards

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Endorsement date : 29th August, 2013

Date of Review : 29th August, 2016 (max. 3 years).

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UNIT TITLE : **Perform Pre-operation Procedures**

DESCRIPTOR : This unit covers the knowledge, skills and attitudes required in performing pre-operation procedures like checking creels, bobbins and shuttle pads.

CODE : **8152 – U1- L2**

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Prepare for works	1.1 Select and use PPE as per the job requirement. 1.2 Select and use required materials as per the job requirement.
2. Carry out the work	2.1 Check creels and bobbins and take necessary action (replace or repair) as per the job requirement. 2.2 Check shuttle pad and take necessary action as per the job requirement.

RANGE STATEMENT

PPE may include but not limited to:

- Ear Muff
- Mask
- Working dress
- Safety boot

ASSESSMENT GUIDE

Methods of Assessment

- The candidate shall have access to all required tools, equipment, materials and documents

- Evidence of performance shall be based on practical demonstration
- Knowledge can be assessed through diagrams, in writing or orally (viva-voce)
- The candidate must complete the assessment in industry accepted time frame

Context for Assessment

- Competency may be assessed in the actual workplace or in a simulated workplace setting

Critical aspect

- Demonstrate compliance with safety regulations applicable to work site operations
- Check creels, bobbins and shuttle pad and take necessary action as per the job requirement.

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Occupational Health and Safety (OHS) Regulation • First Aid • Types and uses of personal protective equipments. • Manufacturer's operation manual. • Familiarity with pre-operation checklist • Positive work values • Basic literacy and numeracy • Types and application of fluids 	<ul style="list-style-type: none"> • Interpret plan and details • Proper use of tools and equipment • Team work • Communication skills • Planning • Time management • Problem solving • Judgment and decision making • Operation and control

UNIT TITLE : **Perform Loom Operation**

DESCRIPTOR : This unit covers the knowledge, skills and attitudes required in setting pattern, threading and re-threading in loom operation works.

CODE : **8152- U2-L2**

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Identify and use required Personal Protective Equipment (PPE) as per the job requirement. 1.2 Identify and use required materials as per the job requirement. 1.3 Identify and use required lubricants and water as per the job requirement.
2. Perform Work	2.1 Set pattern as per the job requirement. 2.2 Carry out threading as per the job requirement 2.3 Carry out re-threading/alignment if necessary following standard procedures 2.4 Attend to tape breakages and take necessary action as per the standard procedures.

RANGE STATEMENT

Materials may include but not limited to:

- Bobbin
- Shutter pad
- Held wire
- Dendrite
- Tension hock

ASSESSMENT GUIDE

Methods of Assessment

- The candidate shall have access to all required tools, equipment, materials and documents
- Evidence of performance shall be based on practical demonstration
- Knowledge can be assessed through diagrams, in writing or orally (viva-voce)
- The candidate must complete the assessment in industry accepted time frame

Context for Assessment

- Competency may be assessed in the actual workplace or in a simulated workplace setting

Critical aspect

- Demonstrate compliance with safety regulations applicable to work site operations
- Select materials in accordance with specifications and job requirements
- Carry out threading as per the job requirement.

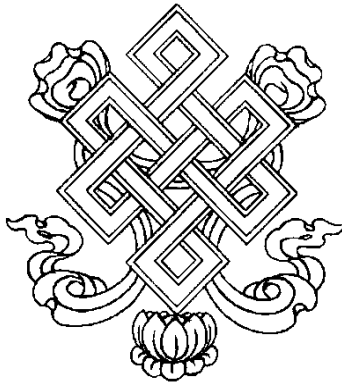
UNDERPINNING KNOWLEDGE

- Occupational Health and Safety (OHS) Regulation
- First Aid
- Types and uses of personal protective equipments.
- Manufacturer's operation manual.
- Positive work values

UNDERPINNING SKILLS

- Interpret plan and details
- Proper use of tools and equipment
- Team work
- Communication skills
- Planning
- Time management
- Problem solving

- | | |
|---|--|
| <ul style="list-style-type: none">• Basic literacy and numeracy• Types and application of fluids | <ul style="list-style-type: none">• Judgment and decision making• Operation and control |
|---|--|



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