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TRAINER GUIDE

National Vocational Certificate Level 1

Version 1 - June, 2019



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Introduction

Competence-based training helps to bridge the gap between what is taught in training and what tasks will be performed on the job. Training trainees to perform actual job functions helps to ensure that future front-line workers have the skills, knowledge and abilities required to perform their jobs properly, safely and effectively. In addition to competence-based training, assessment based on the performance of actual work competencies helps to ensure that:

- trainees are performing their work tasks as safely as possible
- performance gaps are recognized prior to serious incidents
- training can be implemented to improve competence.

There are significant benefits to competence-based training:

1. Cost effectiveness

Since training activities and assessments in a competence-based approach are goal-oriented, trainers focus on clearly defined areas of skills, knowledge and understanding that their own industry has defined in the competence standards. At the same time, trainees are more motivated to learn when they realize the benefits of improved performance.

2. Efficiency

The transfer gap between the training environment and working on the job is reduced substantially in a competence-based approach. This is because training and assessment are relevant to what needs to be done on the job. As a result, it takes less time for trainees to become competent in the required areas. This, in turn, contributes to improved efficiency where training and assessment are concerned.

3. Increased productivity

When trainees become competent in the competence standards that their own industry has defined, when they know what the performance expectations are and receive recognition for their abilities through successful assessments, they are likely to be more motivated and experience higher job satisfaction. The result is improved productivity for organizations. The communication and constructive feedback between future employers and employees will improve as a result of a competence-based approach, which can also increase productivity.

4. Reduced risk

Using a competence-based approach to training, development, and assessment, employers are able to create project teams of people with complementary skills. A trainee's record of the skills, knowledge and understanding relating to the competence standards they have achieved can be used by a future employer to identify and provide further relevant training and assessment for new skills areas. Competence standards can shape employee development and promotional paths within an organization and give employees the opportunity to learn more competencies beyond their roles. It can also provide organizations with greater ability to scale and flex as needed, thereby reducing the risk they face.

5. Increased customer satisfaction

Employees who have been trained and assessed using a competence-based approach are, by the definition of the relevant competence standards, able to perform the required tasks associated with a job. The knock-on effect is that, in service-related industries, they are able to provide high service levels, thereby increasing customer satisfaction. In production or manufacturing industries, they are able to work closely to industry standards in a more effective and efficient way.

Lesson plans

This manual provides a series of lesson plans that will guide delivery of each module for the *(title)* qualification. It is important for trainers to be flexible and be ready to adapt lesson plans to suit the context of the subject and the needs of their trainees.

Good teachers acknowledge that CBT means each and every trainee in the class learns at a different speed. The good teacher is prepared to throw aside the day's lesson plan and do something different (and unplanned) for the class even if it means 'writing' a lesson plan for each trainee to match their learning pace for that day or week.

Learning by doing is different from learning theory and then applying it. To learn to do something, trainees need someone looking over their shoulder saying 'it's not quite like that, it's like this', 'you do it like this because ...', or even 'tell me why you chose to do it like this?'

In this way, trainees learn that theoretical knowledge is meaningless if it is not seen in the context of what they are doing. In other words, if a trainee doesn't know why they do something, they will not do it competently (skills underpinned by knowledge = competent performer).

This is how a *(title)* acquires a practical grasp of the standards expected. It's not by learning it in theory, but because those standards are acquired through correction by people who show what the standards are, and correct the trainee where they do not meet those standards, and where they repeat it correction until they have internalised those standards.

Demonstration of skill

Demonstration or modeling a skill is a powerful tool, which is used, in vocational training. The instructions for trainers for demonstration are as under:

- a) Read the procedure mentioned in the Trainer Guide for the relevant Learning Unit before demonstration.
- b) Arrange all tools, equipment and consumable material, which are required for demonstration of a skill.
- c) Practice the skill before demonstration to trainees, if possible.
- d) Introduce the skill to trainees clearly at the commencement of demonstration.
- e) Explain how the skill relates to the skill(s) already acquired and describe the expected results or show the objects to trainees.
- f) Carry out demonstration in a way that can be seen by all trainees.
- g) Use the same tools and materials that the learner will be using.
- h) Go through EACH of the steps involved in performing the skill.
- i) Go SLOWLY - describe each step as it is completed.
- j) Encourage the learners to move around and watch what you are doing from a number of different angles.

- k) Identify critical or complex steps, or steps that involve safety precautions to be followed.
- l) Explain theoretical knowledge where applicable and ask questions to trainees to test their understanding.
- m) Try to involve the learners: Ask them questions about why they think the process may work that way.
- n) Repeat critical steps in demonstration, if required.
- o) Summarize the demonstration by asking questions to trainees.

Involvement in the process (actively seeing) is important at this stage. When you work on getting involved, getting people to participate, you make them a part of what is happening. Questions for clarification or explanation are important throughout the demonstration. It is up to the learners to ask questions about things they do not understand, but it is also important for trainers to seek out and elicit questions from learners. A trainer may need to do repeated demonstrations of difficult or complex skills.

Overview of the program

Course: <Furniture Technician>	Total Course Duration: 1200 Hrs
Course Overview:	
<p>The purpose of these qualifications is to set high professional standards for furniture industry.</p> <ul style="list-style-type: none"> • Improve the professional competence of the trainees • Shift from informal and non-formal to formal technical and vocational training • Provide opportunities for recognition of skills attained through non-formal or informal pathways • Improve the quality and effectiveness of training and assessment for furniture sector • Enable the existing workforce to capacitate themselves in new technologies and methods 	

Module	Learning Unit	Duration
<p>Module 1: Develop drawings of furniture products manually</p> <p>Aim: The aim of this module to be develop knowledge, skills and understanding to develop drawings of furniture products manually.</p>	<p>LU1: Develop component and size chart</p> <p>LU2: Prepare 2D Multiview drawing of Furniture</p> <p>LU3: Prepare 2D Multiview drawing of Furniture Components</p> <p>LU4:</p>	140 hours
<p>Module 2: Prepare wooden components of the furniture</p> <p>Aim: The aim of this module to be develop knowledge, skills and understanding of preparing wooden components of the furniture.</p>	<p>LU1: Cut wood logs into Planks</p> <p>LU2: Prepare templates for furniture components</p> <p>LU3: Cut wood planks into furniture components</p> <p>LU4: Cut board/ panels into furniture components</p> <p>LU5: Plain surfaces of wooden components</p> <p>LU6: Finalize the size of wooden components</p>	60 hours

Module	Learning Unit	Duration
<p>Module 3: Make Furniture Joints</p> <p>Aim: The aim of this module to be develop knowledge, skills and understanding of making different types of joints being used for furniture manufacturing.</p>	<p>LU1: Perform Cutting</p> <p>LU2: Perform Planing</p> <p>LU3: Prepare joints as per design / drawing</p> <p>LU4: Assemble joints</p>	200 hours
<p>Module 4: Apply surface aesthetics</p> <p>Aim: The aim of this module to be develop advanced knowledge, skills and understanding to apply surface aesthetics on the furniture.</p>	<p>LU1: Perform profiling of components</p> <p>LU2: Perform turning of components</p> <p>LU3: Perform Carving Manually</p> <p>LU4: Perform Marquetry/Parquetry Manually</p>	100 hours
<p>Module 5: Assemble Furniture Products</p> <p>Aim: The aim of this module to be develop basic knowledge, skills and understanding required to assemble the furniture products.</p>	<p>LU1: Pre-Assemble Furniture Products parts</p> <p>LU2: Assemble Furniture Products parts</p> <p>LU3:</p> <p>LU4:</p>	20 hours
<p>Module 6: Perform Finishing Operations on Furniture</p> <p>Aim: The aim of this module to be develop advanced knowledge, skills and understanding required to perform finishing operations on furniture.</p>	<p>LU1: Prepare the surfaces</p> <p>LU2: Perform staining on surfaces</p> <p>LU3: Perform sealing</p> <p>LU4: Perform top finishing</p> <p>LU5: Apply powder coating on metal furniture</p>	120 hours

Module	Learning Unit	Duration
<p>Module 7: Perform Upholstery</p> <p>Aim: The aim of this module to develop advanced knowledge, skills and essential understanding of materials, techniques needed to perform upholstery on furniture.</p>	<p>LU1: Apply Tapestry on the furniture</p> <p>LU2: Apply Canning on the furniture</p> <p>LU3:</p> <p>LU4:</p>	100 hours
<p>Module 8: Prepare Metal Furniture Products</p> <p>Aim: The aim of this module to be develop advanced knowledge, skills and essential understanding required to prepare metal furniture products</p>	<p>LU1: Cut required components from raw material</p> <p>LU2: Prepare furniture components as per design</p> <p>LU3: Assemble the furniture components using welding</p> <p>LU4: Assemble the furniture components using Knockdown method</p>	110 hours
<p>Module 9: Handle Logistics</p> <p>Aim: The aim of this module to develop basic knowledge, skills and understanding needed to handle the logistics at warehouse</p>	<p>LU1: Pack the furniture</p> <p>LU2: Load the furniture for delivery and transportation</p> <p>LU3:</p> <p>LU4:</p>	20 hours
<p>Module 10: Develop drawings of furniture products using CAD/CAM</p> <p>Aim: The aim of this module is to develop advanced knowledge, skills and understanding needed develop drawings of furniture products using CAD/CAM.</p>	<p>LU1: Draw 2D Multiview drawing of Furniture Components on CAD</p> <p>LU2: Develop 3D model of Furniture Components</p> <p>LU3: Convert CAD drawing into CAM Code</p>	140 hours

Module	Learning Unit	Duration
<p>Module 11: Apply surface aesthetics using CNC Machines</p> <p>Aim: The aim of this module to develop advanced knowledge, skills and understanding needed to apply surface aesthetics using CNC machines</p>	<p>LU1: Perform Turning of components on CNC Turning Centre</p> <p>LU2: Perform Carving on CNC Machining Centre</p> <p>LU3: Perform Marquetry/Parquetry on CNC Laser Machine</p>	<p>190 hours</p>

FORMAT FOR LESSON PLAN			
Module: Handle Logistics			
Learning Unit> 2			
Learning Outcomes>			
Methods	Key Notes	Media	Time
Introduction			
To deliver the completed furniture articles to the customers is an important task. The finished product needs extreme care to handle during packaging, loading and transport. All steps are important and may result in scratches, dents, cracks or splitting if handled poorly.			
Main Body			
Importance of packaging. Kinds & properties of packaging materials Working with packaging techniques & machine Working with packaging lists (tags, bar codes, symbols) Warehouse layouts & storage codes Practicing the use of pallet truck and fork lifter Understanding of health & safety precaution while working with the heavy loads (power-point slides, videos, white board and time duration for each activity in the relevant columns)		Multimedia Slides White board Practice	60
Conclusion			
The students acquire knowledge about packaging needs, materials machines involved and their utilization. It involves the practicing of pallets trucks & fork lifter. The whole module is supported with health & safety issues with heavy loads are also included. The lessons are judged practically & have some written assessment.			

Assessment

Narrate the packaging materials

Write down the properties of packaging materials

Pack the furniture items utilizing various packaging materials & methods

Perform loading/unloading of furniture articles employing various vehicles

Observe health & safety while working with heavy loads

Total time:

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Module-1

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Trainer's guidelines

Module 1: 072200889 Handle Logistics			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU1: Pack the furniture	<p>This session is about:</p> <p>P1.Wrap furniture in packaging material (plastic foil, Jumbolon, Bubble wrap, cling foil etc.)</p> <p>P2.Pack the furniture in the carton / wooden box as per shipment requirement</p> <p>P3.Strap the package as per packing requirement</p> <p>P4.Apply identification on package (tags / codes / bar-codes etc.) as per customer and shipment requirement</p> <p>P5.Stack the package in warehouse as per storage layout</p> <p>Begin this session with an illustrated presentation on introduction, need, importance and types of packaging materials.</p> <p>Prepare a presentation to show the properties and probable use as per packaging needs</p> <p>Deliver an illustrated presentation on various kinds of clamps to assemble the furniture parts</p>	Classroom (Multimedia presentation) Workshop/Lab	<p>Product</p> <p>Packaging material (Corrugated sheet, bubble wrap, foam, thermo pore, jumbolon, Polythene wrap, cling foil, packing roll etc.)</p> <p>Strapping machine (manual or automatic)</p> <p>Cling foil binder</p> <p>U-pin stapler</p> <p>U-pins</p> <p>Packaging structural material (Plywood, wood pieces, plastics)</p> <p>Bar-code printer</p>

Module 1: 072200889 Handle Logistics			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
	<p>Deliver a detailed presentation on the following topics covering all aspects step by step</p> <ul style="list-style-type: none"> • Packaging Machines • Packaging Hardware • Packaging Lists • Stacking Methods • Understanding warehouse layouts <p>Hold practical workshops to pack various furniture articles using various materials by hand or machine elaborating each and every step</p>		
LU2: Load the furniture for delivery and transportation	<p>This session is about:</p> <p>P1.Place the packages on pallets as per shipment requirement</p> <p>P2.Wrap the packages on pallet to ensure safety during transportation</p> <p>P3.Load packages on delivery vehicle as per stacking and safety requirements</p> <p>Hold a live demonstration of the operations of a pallet and fork lifter for loading & unloading</p> <p>Prepare a detailed presentation regarding the health & safety precautions related to working with heavy loads</p>	<p>Classroom (Multimedia presentation)</p> <p>Workshop/Lab</p>	Videos of pallet & fork lifter working & related safety

Frequently Asked Questions

<p>1. What is Competency Based Training (CBT) and how is it different from currently offered trainings in institutes?</p>	<p>Competency-based training (CBT) is an approach to vocational education and training that places emphasis on what a person can do in the workplace as a result of completing a program of training. Compared to conventional programs, the competency based training is not primarily content based; it rather focuses on the competence requirement of the envisaged job role. The whole qualification refers to certain industry standard criterion and is modularized in nature rather than being course oriented.</p>
<p>2. What is the passing criterion for CBT certificate?</p>	<p>You shall be required to be declared “Competent” in the summative assessment to attain the certificate.</p>
<p>3. What are the entry requirements for this course?</p>	<p>The entry requirement for this course is 8th Grade or equivalent.</p>
<p>4. How can I progress in my educational career after attaining this certificate?</p>	<p>You shall be eligible to take admission in the National Vocational Certificate Level-3 in Leather Products Development Technician (Pattern Maker). You shall be able to progress further to National Vocational Certificate Level-4 in Leather Products Development Technician (Computerized Pattern Designer); and take admission in a level-5, DAE or equivalent course. In certain case, you may be required to attain an equivalence certificate from The Inter Board Committee of Chairmen (IBCC).</p>

<p>5. If I have the experience and skills mentioned in the competency standards, do I still need to attend the course to attain this certificate?</p>	<p>You can opt to take part in the Recognition of Prior Learning (RPL) program by contacting the relevant training institute and getting assessed by providing the required evidences.</p>
<p>6. What is the entry requirement for Recognition of Prior Learning program (RPL)?</p>	<p>There is no general entry requirement. The institute shall assess you, identify your competence gaps and offer you courses to cover the gaps; after which you can take up the final assessment.</p>
<p>7. Is there any age restriction for entry in this course or Recognition of Prior Learning program (RPL)?</p>	<p>There are no age restrictions to enter this course or take up the Recognition of Prior Learning program</p>
<p>8. What is the duration of this course?</p>	<p>The duration of the course work is 1,510 hrs. (approx. 11 months)</p>
<p>9. What are the class timings?</p>	<p>The classes are normally offered 25 days a month from 08:00am to 01:30pm. These may vary according to the practices of certain institutes.</p>
<p>10. What is equivalence of this certificate with other qualifications?</p>	<p>As per the national vocational qualifications framework, the level-4 certificate is equivalent to Matriculation. The criteria for equivalence and equivalence certificate can be obtained from The Inter Board Committee of Chairmen (IBCC).</p>
<p>11. What is the importance</p>	<p>This certificate is based on the nationally</p>

of this certificate in National and International job market?	standardized and notified competency standards by National Vocational and Technical Training Commission (NAVTTTC). These standards are also recognized worldwide as all the standards are coded using international methodology and are accessible to the employers worldwide through NAVTTTC website.
12. Which jobs can I get after attaining this certificate? Are there job for this certificate in public sector as well?	You shall be able to take up jobs in the leather products making companies in the functions of cutting, stitching and finishing of leather gloves and garments.
13. What are possible career progressions in industry after attaining this certificate?	You shall be able to progress up to the level of supervisor after attaining sufficient experience, knowledge and skills during the job. Attaining additional relevant qualifications may aid your career advancement to even higher levels.
14. Is this certificate recognized by any competent authority in Pakistan?	This certificate is based on the nationally standardized and notified competency standards by National Vocational and Technical Training Commission (NAVTTTC). The official certificates shall be awarded by the relevant certificate awarding body.
15. Is on-the-job training mandatory for this certificate? If yes, what is the duration of on-the-job training?	On-the-job training is not a requirement for final / summative assessment of this certificate. However, taking up on-the-job training after or during the course work may add your chances to get a job afterwards.
16. How much salary can I get on job after	The minimum wages announced by the Government of Pakistan in 2019 are PKR 17,500.

attaining this certificate?	This may vary in subsequent years and different regions of the country. Progressive employers may pay more than the mentioned amount.
17. Are there any alternative certificates which I can take up?	There are some short courses offered by some training institutes on this subject. Some institutes may still be offering conventional certificate courses in the field.
18. What is the teaching language of this course?	The teaching language of this course is Urdu and English.
19. Is it possible to switch to other certificate programs during the course?	There are some short courses offered by some training institutes on this subject. Some institutes may still be offering conventional certificate courses in the field.
20. What is the examination / assessment system in this program?	Competency based assessments are organized by training institutes during the course which serve the purpose of assessing the progress and preparedness of each student. Final / summative assessments are organized by the relevant qualification awarding bodies at the end of the certificate program. You shall be required to be declared "Competent" in the summative assessment to attain the certificate.
21. Does this certificate enable me to work as freelancer?	You can start your small business of stitching leather garments, gloves or other products. You may need additional skills on entrepreneurship to support your initiative.

Short Question & Answers

Is logistics important?	Off course it is very important; otherwise the product remains in the warehouse instead of reaching to the customer.
Narrate various types of packaging materials?	<ol style="list-style-type: none"> 1. Jumbolan 2. Bubble Wrap 3. Thermopore 4. Plastic wrap 5. Corrugated sheet 6. Cling foil 7. Packing roll
What are the types of packaging lists?	<ol style="list-style-type: none"> 1. Tags 2. Barcodes 3. Labels 4. Symbols 5. QR-code
What is the sequence of packing a product?	<ol style="list-style-type: none"> 1. Wrapping in packaging material 2. Carton packing 3. Strapping 4. Packaging lists 5. Stacking
How to track the product in Warehouse?	To track the product barcodes, QR codes or symbols are being pasted on the product and placed in series to locate in the warehouse.

Test Yourself (Multiple Choice Questions)

Question 1 The different packing materials include

- A Jumbolan
- B Bubble Wrap
- C Thermo pore
- D All of the above

Question 2 The best method to strap the packed furniture is

- A Plastic tape Foil
- B Cling Foil
- C Metal Foil
- D None of the above

Question 3 The best identification method for specific item is

- A Bar Code
- B Batch No.
- C Tags
- D None of the above

Question 4 The packed furniture is move around using

- A Pallets
- B Fork lifter
- C Hand held method
- D None of the above

Question 5 Working with heavy loads needs

- A Special emphasis on safety
- B Special emphasis on fork lift safety
- C Stacking safety procedures
- D All of the above

Answers

- Q1. D
- Q2. B
- Q3. A
- Q4. B
- Q5. D

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