

National Technical and Vocational Qualification Framework

NTVQF

**Competency Based Learning Materials
(CBLMs)**

Develop Competency Based Assessment Tools

**National Certificate in CBT&A Methodology
Trainers & Assessors, Level-4**



**Bangladesh Technical Education Board
Agargaon, Sher-E-Bangla Nagar
Dhaka-1207**

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Copyright

This Competency Based Learning Materials on “Developing Competency Based Assessment Tools” under the CBT&A Methodology for Trainers &Assessors, Level-4 qualification is developed based on the national competency standard approved by Bangladesh Technical Education Board (BTEB).

This document is to be used as a key reference point by the competency-based learning materials developers, teachers/trainers/assessors as a base on which to build instructional activities.

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Preface

Education and training for productive employment is vital for economic and social development in Bangladesh. Technical and Vocational Education and Training (TVET) is a tool for productivity enhancement and poverty reduction. TVET sector ensures quality, relevance and access of skills training which meets industry demand and fulfill the requirements of individual for opting gainful and productive employment.

Competency-based learning materials on “Developing Competency Based Assessment Tools” provides overall course guidelines in relation to teaching and learning and act as the key instrument in supporting delivery of standardised formal, non-formal and informal training. It is expected that competency-based learning materials (CBLMs) will serve the purpose of training delivery of different courses maintaining quality as specified in the approved national competency standard for CBT&A Methodology for Trainers & Assessors, Level-4. As it is agreed that any reform in TVET system in Bangladesh should be in line with international trends so as to make graduates from the qualification nationally and internationally competent.

It will be worth noting that the initiatives for development of National Certificate in CBT&A Methodology, Level-4 & Level-5 through review and updating of existing competency standards of trainers & assessors, development of new competency standard for National Certificate for CBT&A Managers and implementers, Level-6 and Competency Based Curriculum development for the above mentioned courses by the Skills 21 – Empowering Citizens for Inclusive and Sustainable Growth Project, ILO. This document is developed by the Standards and Curriculum Development Committee of BTEB under the guidance of International Expert (TVET and Skills Development Specialist) and the National consultant, Skills 21 – Empowering Citizens for Inclusive and Sustainable Growth Project, ILO country Office for Bangladesh.

We appreciate Skills 21 – Empowering Citizens for Inclusive and Sustainable Growth Project, ILO, funded by European Union (EU) for developing competency-based learning materials on “Developing Competency Based Assessment Tools” of CBT&A Methodology for Trainers & Assessors, Level-4 qualification under National Technical and Vocational Qualification Framework (NTVQF).

Chairman
Bangladesh Technical Education Board

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Acronyms

BMET	Bureau of Manpower Employment and Training
BTEB	Bangladesh Technical Education Board
CAD	Course Accreditation Document
CBC	Competency Based Curriculum
CBLMs	Competency Based Learning Materials
CBT	Competency Based Training
CBT&A	Competency Based Training and Assessment
CS	Competency Standard
DTE	Directorate of Technical Education
EU	European Union
ILO	International Labour Organization
LCD	Liquid Cristal Display
MOE	Ministry of Education
MOEWOE	Ministry of Expatriate Welfare and Overseas Employment
MOLE	Ministry of Labour and Employment
NEP	National Education Policy
NGOs	Non-Government Organisations
NSDA	National Skills Development Authority
NSDC	National Skills Development Council
NSDP	National Skills Development Policy
NTVQF	National Technical and Vocational Qualification Framework
OSH	Occupational Safety and Health
PCs	Personal Computers
QAMS	Quality Assurance Manuals
RPL	Recognition of Prior Learning
SCDC	Standards and Curriculum Development Committee
RTO	Registered Training Organization
TSC	Technical School and College
TTC	Technical Training Centre
TTTC	Technical Teachers Training College
TVET	Technical Vocational Education and Training
VET	Vocational Training Institute
VTTI	Vocational Teachers Training Institute

Overview of the Module

Developing Competency Based Assessment Tools

This module comprises four elements (1 to 4), and four (4) learning outcomes derived from the unit of competency TVTASL403A1: Develop competency-based assessment tools.

Upon completion of this module, the trainee must be able to:

1. Establish evidence requirement
2. Establish suitable assessment methods
3. Prepare assessment tools
4. Validate assessment tools

After completion of the training, the trainees will be required to demonstrate their competency through the following performance criteria:

- 1.1 Required consumable items and equipment's are arranged.
- 1.2 Competency standards and curriculum are identified.
- 1.3 Relevant unit(s) of competency are read and interpreted.
- 1.4 Required evidence are identified covering all unit of competency.
- 1.5 Evidence matrix are prepared to identify the method of assessment.

- 2.1 Suitable **assessment methods** are identified that are consistent with the evidence requirements.
- 2.2 Types of assessment questions are decided considering the qualification levels to be assessed.
- 2.3 Evidence guide and relevant assessment guidelines are accessed and used.
- 2.4 Assessment methods are selected which are appropriate for the competency being assessed and in line with the ***purpose and assessment context***.

- 3.1 Standard format of the assessment tools is followed.
- 3.2 Units of competency are considered and incorporated during the tool's development.
- 3.3 Assessment tools are prepared in accordance with the advice provided in the relevant assessment guidelines.
- 3.4 Clear and concise written instructions and materials are prepared for the assessor and the candidate which accurately describe the assessment activity.
- 3.5 Assessment tools are checked considering principles of competency-based assessment.
- 3.6 Safety and security of the tools are ensured by the developers maintaining moral and ethical point of views.

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- 4.1 Draft assessment tools are checked against ***evaluation criteria*** and amended.
- 4.2 Assessment tools are pilot tested with a small sample of assessors and industry practitioners.
- 4.3 Information gathered through the validation are analyzed to establish any changes that may be required.
- 4.4 Assessment tools are finalized incorporating suggested changes.

CONTENTS

This learning package includes the following:

- Establish evidence requirements
- Establish suitable assessment methods
- Prepare assessment tools
- Validate assessment tools

PRE-REQUISITE: N/A

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How to use this Competency Based Learning Materials (CBLMs)

The module, “Developing the competency-based assessment tools” contains training materials and activities for you to complete a series of activities. These activities may be completed as part of structured classroom activities or you may be required to work at your own pace. These activities will ask you to complete associated learning and practice activities in order to gain knowledge and skills you need to achieve the learning outcomes.

1. Review the **Learning Activity** page to understand the sequence of learning activities you will undergo. This page will serve as your road map towards the achievement of competence.
2. Read the **Information Sheets**. This will give you an understanding of the jobs or tasks you are going to learn how to do. Once you have finished reading the **Information Sheets** complete the questions in the **Self-Check**.
3. **Self-Checks** are found after each **Information Sheet**. **Self-Checks** are designed to help you know how you are progressing. If you are unable to answer the questions in the **Self-Check** you will need to re-read the relevant **Information Sheet**. Once you have completed all the questions check your answers by reading the relevant **Answer Keys** found at the end of this module.
4. Next move on to the **Job Sheets**. **Job Sheets** provide detailed information about *how to do the job* you are being trained in. Some **Job Sheets** will also have a series of **Task Sheets**. These sheets have been designed to introduce you to the job step by step. This is where you will apply the new knowledge you gained by reading the Information Sheets. This is your opportunity to practise the job. You may need to practise the job or activity several times before you become competent.
5. Specification **sheets**, specifying the details of the job to be performed will be provided where appropriate.
6. A review of competency is provided on the last page to help remind if all the required assessment criteria have been met. This record is for your own information and guidance and is not an official record of competency

When working through this Module always be aware of your safety and the safety of others in the training room. Should you require assistance or clarification please consult your trainer or facilitator.

When you have satisfactorily completed all the Jobs and/or Tasks outlined in this module, an assessment event will be scheduled to assess if you have achieved competency in the specified learning outcomes. You will then be ready to move onto the next Unit of Competency or Module

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MODULE CONTENT

UNIT OF COMPETENCY: Develop Competency Based Assessment Tools

MODULE TITLE: Developing Competency Based Assessment Tools

MODULE DESCRIPTOR: This module discusses the aspects that must be given attention when developing the competency assessment tools. It shows the requirements for determining evidence requirements, selecting appropriate assessment methods, preparing assessment tools and validating assessment tools in accordance with the relevant Assessment Guidelines.

NOMINAL DURATION: 40 Hours

LEARNING OUTCOMES:

Upon completion of this module, the trainee must be able to:

1. Establish evidence requirements
2. Establish suitable assessment methods
3. Prepare assessment tools
4. Validate assessment tools

ASSESSMENT CRITERIA:

1. Competency standards are identified which describe the work activities to be assessed.
2. Relevant unit(s) of competency are read and interpreted to identify the required evidence.
3. Evidence requirements are identified which show full coverage and consistent performance of the relevant work activities.
4. Suitable assessment methods are identified that are consistent with the evidence requirements and the advice provided in the Evidence Guide and relevant Assessment Guidelines.
5. Assessment methods are selected which are appropriate for the competency being assessed, and in line with the purpose and assessment context.
6. Assessment tools are prepared in accordance with the advice provided in the relevant Assessment guidelines.
7. Clear and concise written instructions and materials are prepared for the assessor and the candidate, which accurately describe the assessment activity.
8. Assessment tools are checked for validity, fairness, and safety and cost effectiveness.
9. Draft assessment tools are checked against evaluation criteria and amended, when necessary
10. Assessment tools are pilot tested with a small sample of assessors and industry practitioners
11. Information gathered through the validation are analysed to establish any changes that maybe required.
12. Assessment tools are finalised incorporating suggested changes as appropriate.

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LEARNING OUTCOME 1: ESTABLISH EVIDENCE REQUIREMENT

ASSESSMENT CRITERIA

- 1.1 Competency standards are identified which describe the work activities to be assessed
- 1.2 Relevant unit(s) of competency are read and interpreted to identify the required evidence
- 1.3 Evidence requirements are identified which show full coverage and consistent performance of the relevant work activities.

CONTENTS:

- Competency Assessment
- Competency Standard
- Evidences
- Evidence Plan

CONDITIONS:

Trainees must be provided with the following:

- Handouts or reference materials/books on the above stated contents
- PCs/printers or laptops with internet access
- LCD/Digital Projector and Screen
- Microphones
- Bond paper
- Ball pens/pencils and other office supplies and materials
- Communication resources
- Workplace or simulated environment

METHODOLOGIES:

- Lecture/discussion
- Demonstration/application
- Presentation

ASSESSMENT METHODS:

- Written test
- Demonstration
- Oral Questioning
- Observation with checklist
- Portfolio.

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Learning Experiences 11.1-1

Learning Outcome 1

ESTABLISH EVIDENCE REQUIREMENTS

Learning Activities	Recourses/Special Instructions
Identifying the competency assessment	• Read Information sheet 11.1-1. The competency assessment. • Answer Self-check 11.1-1, refer to answer key 11.1-1 to check if you have answered the questions correctly.
Familiarising with the Competency Standard	• Read the Information Sheet 11.1-2, The Competency Standard • Answer Self-check 11.1-2, refer to the answer key to check your answer.
Characterise the Evidences	• Read Information sheet 11.1-3. Characteristics of Evidences • Answer Self-check 11.1-3 • Check your answer with Answer key 11.1-3
Preparing the evidence plan	• Read the information sheet 11.1-4. Handouts and reference materials. • Perform Task Sheet 11.1-4, use the performance criteria to check if you made the correct output

Information Sheet 11.1-1

The Competency Assessment

Learning Objective:

After reading this Information Sheet, you must be able to define competency assessment.

Understanding competency assessment is necessary for the developer of competency assessment tool. It will give ideas on how the tools will be develop.

Competency Assessment:

It is the process of collecting evidences and making judgement on the nature and extent of progress towards achievement of performance requirements set in a standard.

To further define competency assessment, it is important to know the context of *competency* and *assessment*.

Competency

Competency involves application of knowledge, skills and attitudes to perform work activities according to the standard expected in the workplace.

Competencies are gained through:

- life experience;
- formal education;
- apprenticeship;
- on-the-job experience;
- self-help programmes; and
- training and development programmes

Key features of competency

- being able to do the job;
- knowing how and why things are done;
- knowing what to do if things go wrong; and
- knowing the right approach to do a job properly and safely.

Dimensions of competency

In every qualification and unit of competency, all of the dimensions of competency must be present.

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1. Task Skills

This requires performance of the task(s) to the required standard as described in the unit of competency and expected in the workplace.

Assessor needs to collect evidence(s) that the trainee can do the individual actions as well as the whole task.

2. Task Management Skills

Captures the skills used as people plan and integrate a number of potentially different tasks to achieve a complete work outcome.

Candidate should provide evidence that they can work efficiently to meet deadlines, handle a sequence of interrelated tasks and progress smoothly between tasks.

3. Contingency Management Skills

The requirement to respond to irregularities and breakdowns in routines.

Candidates should show evidence of dealing with contingencies.

- Breakdown
- Irregularities
- Imperfections
- Complaints

1. Job/Role Environment

- The requirement to deal with the responsibilities and expectations of the work environment
- The capacity to work with others and adapt to different situations is central to successful performance.
 - Does the candidate comply with workplace procedures and standard methods in performing the task?
 - Does the candidate communicate effectively?
 - Does the candidate observe enterprise and regulatory requirements?

Assessment

It is based on the actual skills and knowledge a person can demonstrate in the workplace. Where competency standards for an industry/occupation do not exist, performance can be assessed against set criteria such as award classifications, standard operating procedures and performance agreements. In the competency-based assessment system, the competencies of the person are recognized no matter how or where they were acquired.

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Assessment Compared:

Traditional	Competency-based
• Associated to a course of programme • Assessed by means of subject • Parts of the programme are included in final examinations • Passing criteria are based on marking scales • Questions are ignored • It is done within limited periods of time • Statistical comparisons are used	• Multiple forms of evidence • Workplace performance • Workplace skills are the main focus of assessment • The assessment is individual, there is no comparison among other • It includes the recognition of acquired competencies • Basis of training and development • It provides judgments for the assessed workers; competent or not yet competent • It is the basis for the certification of competency workers

Self -Check 11.1-1

Direction:

Given the following statements/scenario, identify what dimension of competency is being described. Write your responses on the answer sheet provided.

- _____ 1. Notification of shift availability, or non-attendance for shift, is given without undue delay and according to store policies and procedures
- _____ 2. Relevant safety systems information is accessed, analysed and used in responding to an identified hazard.
- _____ 3. Following presentation, feedback on the product design is from the appropriate personnel. Any modifications and are identified and incorporated to the final design.
- _____ 4. Tools and equipment are cleaned and stored in accordance with workplace requirements.
- _____ 5. Trainers manage unexpected circumstances happened during the actual conduct of the tasks.

Answer Key 11.1-1

Sl. No.	Answer Key 11.1-1
1.	Job/Role environmental skills
2.	Contingency Management Skills
3.	Task Management Skills
4.	Task Skills
5.	Contingency Management Skills

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Information Sheet 11.1-2

The Competency Standard

Learning Objectives:

After reading this Information Sheet, you must be able to identify Competency Standard and use its relevance in developing competency assessment tool.

Competency Standard

Competency Standard (CS) is the written specification of the knowledge, skills and attitudes required for the performance of a job, occupation or trade and the corresponding standard of performance required in the workplace.

The information covered in the CS will provide the developer clear idea on the tasks that will be performed and managed, the contingencies that might arise, and situations wherein the identified tasks will be applied.

Course Accreditation Document (CAD)

The Course Accreditation Document (CAD) is a material that contains information on the required evidences that must be collected during the assessment. It serves as reference material in the development of assessment tool.

It comprises the Unit of Competency that covers the required competencies for a specific qualification. The developer of the competency assessment tool should learn how to use the list of competencies assigned for a qualification, and determine where from the CAD the information could be obtained. This is to ensure alignment of the assessment tool with the required competencies.

Unit of Competency

A unit of competency describes a work activity and serves as a guide to the assessor in determining whether the learner is already competent.

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Unit of competency

Unit Title	Work effectively within Bangladesh TVET sector
Unit Code	TVTENV401A1
Unit Descriptor	This unit covers the knowledge, skills and attitude required to work effectively within Bangladesh TVET sector. It includes interpreting TVET scenario of Bangladesh and relevant policy documents, interpreting quality assurance system, working within the training organizations, managing work relationships with colleagues and clients and assisting learner to develop competency as per needs and interests.
Nominal Hours	40 hours
Elements of Competency	Performance Criteria <i>Bold and Italicized</i> terms are elaborated in the range of variables
1. Interpret TVET scenario of Bangladesh and relevant policy documents	1. <i>TVET terminologies</i> are listed and defined. 2. <i>Relevant policies and laws</i> are accessed and interpreted. 3. Courses and curriculum documents of TVET systems are accessed and identified. 4. Work practices are applied in line with policy framework.
2. Interpret quality assurance system	2.1. Quality issues of TVET are identified and illustrated. 2.2. Quality Assurance Manuals (QAMs) are identified and accessed. 2.3. Course Accreditation documents (CAD) are identified and accessed.
3. Work within the training organizations	3.1 TVET <i>providers and development organizations</i> 3.2 Work is undertaken according to prevailing competency standards 3.3 Employee/staff relations systems are followed 3.4 Ethical and legal responsibilities are maintained according to the organisational policies and procedures
4. Manage work relationships with colleagues and clients	4.1 Work is planned and undertaken in collaborative way with colleagues.

	4.2 Information and ideas are shared and worked together on agreed outcomes. 4.3 Feedback from clients and colleagues are obtained, evaluated and acted. 4.4 Clients and their needs and expectations are identified through effective communication.
5. Assist learner to develop competency as per needs and interests	5.1 Information are provided to the learners about how their competencies relate to job profiles, educational and training pathway. 5.2 Training requirements and employment opportunities are explained. 5.3 Learner confidentiality is maintained according to organizational policies and procedures.
Range of Variables	
Variable	Range (May include but not limited to:)
1. TVET terminologies	1.1 TVET 1.2 NTVQF 1.3 VET 1.4 Skill 1.5 Knowledge 1.6 Attitude 1.7 Task element 1.8 Task 1.9 Job 1.10 Competency 1.11 RPL 1.12 Glossary of terms in CBT system 1.13 Competency based Training (CBT) 1.14 Performance based Education 1.15 Generic, Sector Specific and Occupational specific Competency
2. TVET policies and laws	2.1 TVET chapter of National Education Policy (NEP) 2.2 National Skills Development Policy (NSDP) 2.3 Equity Policy 2.4 apprenticeship act 2.5 Modified TVET legislations (Act of BTEB, NSDA) 2.6 National Technical and Vocational Qualifications Framework (NTVQF) & Level descriptor 2.7 TVET data system 2.8 RPL system

3. TVET providers and development organizations	3.1 Bangladesh Technical Education Board (BTEB) 3.2 Relevant ministries and departments within the government including: 3.2.1 Ministry of Education (MOE) 3.2.2 Ministry of Expatriates' Welfare and Overseas Employment (MOEWOE) 3.2.3 Ministry of labor and Employment (MOLE) 3.2.4 Directorate of Technical Education (DTE) 3.2.5 Bureau of Manpower Employment and Training (BMET) 3.3 Relevant Departments and/or Units 3.3.1 National Skills Development Council 3.3.2 Technical Teacher Training College 3.3.3 Vocational Teacher Training Institute 3.3.4 Technical School and College 3.3.5 Technical Training Centre 3.3.6 Polytechnics Institutes 3.3.7 Textile Vocational Institutes 3.3.8 Other Government TVET providers 3.4 NGOs & Private training institutes
4. Clients	4.1. Industry 4.2. Institute 4.3. Employers 4.4. Guardians 4.5. Trainees

Evidence Guide

The evidence guide provides advice on assessment and must be read together with the performance criteria, required skills and knowledge and range of variable. Evidence must be gathered in the workplace wherever possible. Where no workplace is available, a simulated workplace must be provided.

To achieve competency in this unit, a trainee must be able to provide evidence in the form of the following:

1. Critical Aspects	The assessment required evidence that the candidate: 1.1. accessed and interpreted TVET policies and laws 1.2. interpreted reformed TVET system 1.3. explained NTVQF 1.4. interpreted National Skills Development Policy 1.5. explained RPL systems 1.6. interpreted National Quality Assurance manual 1.7. presented skills data system 1.8. established effective industry-institute linkage
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2. Underpinning knowledge	2.1 National Technical and Vocational Qualifications Framework (NTVQF) 2.2 National Skills Development Policy 2.3 Equity Policy 2.4 National policy for RPL and apprenticeship 2.5 Organization's quality assurance strategies, processes, policies and procedures 2.6 Industry competency standards relevant to trade area 2.7 TVET Employee relations systems and practices 2.8 National Quality Assurance System 2.9 TVET legislations 2.10 National TVET Data system
3. Underpinning Skills	3.1 Interpreting cognitive and interpretation skills on national and organizational policy documents and client needs 3.2 Language and literacy skills to read and interpret a range of documentation, including technical and subject matter documents, references and texts 3.3 Presenting interpersonal skills to communicate with clients and stakeholders 3.4 Teamwork skills to cultivate collaborative and participative work relationships
4. Required Attitude	4.1 Commitment to occupational safety and health 4.2 Environmental concerns 4.3 Tidiness and timeliness 4.4 Respect for rights of peers and seniors in workplace 4.5 Eagerness to learn 4.6 Promptness in carrying out activities 4.7 Sincere and honest to duties and responsibilities 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource Implication	The following resources must be provided: 5.1 Computer hardware, facilities and relevant accessories of the computer 5.2 Consumables materials to perform activities 5.3 Required teaching aids 5.4 Learning Materials
6. Methods of Assessment	Competencies could be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning

	6.4 Portfolio
7. Context of Assessment	7.1 Competencies must be assessed in an accredited training centre/assessment centre or in an actual workplace or in a simulated workplace setting 7.2 Assessment shall be observed while tasks are being undertaken whether individually or in a group 7.3 Trainee must be assessed by BTEB certified assessor or BTEB approved person.
Accreditation Requirements Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.	

The developer should be made familiar with the competency standard as well as units of competency. This will enable the developer to identify the evidences to be collected.

Scope of a Unit of Competency

- Useful and manageable for purposes of assessment and recognition;
- Not so broad that the unit contains functions that would not normally be completed by one person;
- Ways of defining scope - training time allocation, number of elements and performance criteria, comparable work functions, work functions performed by individuals;
- Avoid units - of different size/ scope within the same set of competency standards; and
- Ways of defining scope:
 - Training time allocation
 - Number of elements and performance criteria
 - Comparable work functions
 - Work functions performed by individual

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Where to find the information in a competency standard?

What do you need to know about the work activity?	Where is the information found?	What does the unit of competency tell you?	Example
What is the work activity?	Unit title	➤ Defines the area of competency ➤ Written in output terms - ‘obtain, prepare and supply materials for production’ [verb] ➤ A well framed unit will comprise a manageable component of work ➤ Appropriate balance between units that are too broad or too narrow	Work effectively within Bangladesh TVET sector
What does the work activity involve?	Unit Descriptor	➤ Outlines what is done in the workplace ➤ Expounds on information in the title ➤ Helps to differentiate competencies with similar titles	This unit covers the knowledge, skills and attitude required to work effectively within Bangladesh TVET sector. It includes interpreting TVET scenario of Bangladesh and relevant policy documents, interpreting quality assurance system, working within the training organizations, managing work relationships with colleagues and clients and assisting learner to develop competency as per needs and interests.
What skills are needed to perform the activity	Elements	➤ Building blocks of a unit of competency ➤ Describe in outcome terms the functions that the person who works in a particular area of work is able to perform ➤ Describes actions or outcomes that are demonstrable and assessable and which the candidate must attain.	1. Interpret TVET scenario of Bangladesh and relevant policy documents 2. Interpret quality assurance system 3. Work within the training organizations 4. Manage work relationships with colleagues and clients 5. Assist learner to develop competency as per needs and interests
What level of	Performance	➤ Specify what is assessed and the required level of performance	1.1 TVET terminologies are listed and defined.

skills is needed	Criteria	➤ As precise as possible so that standards are assessable ➤ Cover all component/s dimensions of competency	1.2 Relevant policies and laws are accessed and interpreted. 1.3 Courses and curriculum documents of TVET systems are accessed and identified. 1.4 Work practices are applied in line with policy framework 2.1 Quality issues of TVET are identified and illustrated. 2.2 Quality Assurance Manuals (QAMs) are identified and accessed. 2.3 Course Accreditation documents (CAD) are identified and accessed. 3.1 TVET providers and development organizations 3.2 Work is undertaken according to prevailing competency standards 3.3 Employee / staff relations systems are followed 3.4 Ethical and legal responsibilities are maintained according to the organisational policies and procedures 4.1 Work is planned and undertaken in collaborative way with colleagues. 4.2 Information and ideas are shared and worked together on agreed outcomes. 4.3 Feedback from clients and colleagues are obtained, evaluated and acted. 4.4 Clients and their needs and expectations are identified through effective communication
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			5.1 Information are provided to the learner about how companies relate to job profiles, educational and training pathways 5.2 Training requirements and employment opportunities are explained 5.3 Learner confidentiality is maintained according to organisational policies and procedures.
What are the conditions under which this work activity may be conducted?	Range of variables	➤ Defines the boundaries within which the unit of competency applies ➤ Range of situations that should be the focus of assessment ➤ Relates to the unit of competency as a whole ➤ Allows for the insertion of specific knowledge and enterprise requirements ➤ Adjust range of variables to update standards	The variable for this unit of competency includes: TVET Technologies Range: Includes but not limited to: • TVET • NTVQF • VET • Skills • Knowledge • Attitudes • competency • Task • Elements • RPL • VET Policies and Laws Range: • National Education policy • National Skills Development Policy etc. • TVET Provider • Development Organisations Range: See unit of competency

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			• Clients Range: See unit of competency
What evidence is needed to prove that a person is competent?	Critical aspects of competency	➤ Tells the assessor what evidence is essential for a successful performance of a competency or skills. It identifies the essentials: ➤ Productive Evidence – complete product or workplace/service specification ➤ Knowledge evidence – things that must be known Process evidence: ➤ Complies with industry practice and procedures ➤ Complies with OH&S practice ➤ Sets-up tools and equipment ➤ Handles tools, materials, and equipment ➤ Identifies and solves faults and problems ➤ Communicates with others to ensure safe and effective operations	1.1 accessed and interpreted TVET policies and laws 1.2 interpreted reformed TVET system 1.3 explained NTVQF 1.4 interpreted National Skills Development Policy 1.5 explained RPL systems 1.6 interpreted National Quality Assurance manual 1.7 presented skills data system 1.8 established effective industry-institute linkage
What knowledge and skills are needed to perform this work activity?	Required knowledge	➤ Competency involves applying knowledge activities ➤ Underpinning knowledge includes: • Competency standards and guidelines • OSH regulations and procedure	2.11 National Technical and Vocational Qualifications Framework (NTVQF) 2.12 National Skills Development Policy 2.13 Equity Policy 2.14 National policy for RPL and apprenticeship 2.15 Organization's quality assurance strategies, processes, policies and procedures

			2.16 Industry competency standards relevant to trade area 2.17 TVET Employee relations systems and practices 2.18 National Quality Assurance System 2.19 TVET legislations 2.20 National TVET Data system
What work skills are needed?	Required skills	➤ Skills in evaluating evidences and making assessment decision, etc. ➤ This provides the assessor with a list of the skills needed to achieve the elements and performance criteria in the unit of competency ➤ It includes both: 1) generic skills such as communication skills, computation skills, etc.; and 2) industry specific skills (use of hand tools) such as equipment, etc.	3.5 Interpreting cognitive and interpretation skills on national and organizational policy documents and client needs 3.6 Language and literacy skills to read and interpret a range of documentation, including technical and subject matter documents, references and texts 3.7 Presenting interpersonal skills to communicate with clients and stakeholders 3.8 Teamwork skills to cultivate collaborative and participative work relationships
What resources are required to gather the evidence	Resource implications	➤ This section identifies the resources needed for the successful performance of the work activity described in the unit of competency ➤ This usually includes: work environment conditions, tools, equipment and materials	The following resources must be provided 5.5 5.1 Computer hardware, facilities and relevant accessories of the computer 5.6 Consumables materials to perform activities 5.7 Required teaching aids 5.8 Learning Materials

Where should evidence of competency be gathered?	Context of assessment	• There may be instances wherein it is impractical to carry out the assessment in the workplace • Developers should provide guidance on appropriate simulation techniques • The achievement of valid assessment in a simulated environment may require additional factors to be included in the assessment process	7.4 Competencies must be assessed in an accredited training centre/assessment centre or in an actual workplace or in a simulated workplace setting 7.5 Assessment shall be observed while tasks are being under taken whether individually or in a group 7.6 Trainee must be assessed by BTEB certified assessor or BTEB approved person.
What method of assessment will be use in evaluating knowledge, skills and attitude of the learner?	Method of assessment	• This component provides advice on: • When evidence should be collected • The ways of collecting evidences; and, • Whether evidences should be collected over a period of time • This information is provided in order to: • Cover all aspects of the unit • Determine whether it is necessary to collect evidence in a particular way over time; and, • Establish consistency in performance	Competencies must be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning 6.4 Portfolio

Self-Check 11.1-2

Direction: Match the Parts of CS (Column B) with its description (Column A). Write the corresponding letter in the separate sheet provided.

Column A (Definition)	Column B (Parts of CS)
1. It is the building blocks of the unit of competency	A. Critical aspects of competency
2. It specifies what is being assessed and the required level of performance.	B. Required skills
3. It tells the assessor what evidence is essential for a successful performance of a competency or skill.	C. Required Knowledge
4. It indicates the required knowledge in performing the activities.	D. Elements
5. It tells what skills are needed to acquire the elements and performance criteria in the unit of competency	E. Range of variables
	F. Context of assessment
	G. Performance Criteria
	H. Unit Title

Answer Key 11.1-2

Sl. No.	Answer Key 11.1-2
1.	D
2.	G
3.	A
4.	C
5.	B

Information Sheet 11.1- 3

Characteristics of Evidence

Learning Objectives:

After reading this Information Sheet, you must be able to determine the different rules of evidence.

The development of a good competency assessment tool also requires knowledge on evidences that should be gathered during the conduct of assessment. Developers have to differentiate the evidences and determine the corresponding ways of collecting it. This would direct the developer to easily identify and access the set evidence.

Types of Evidence

Evidence is information that is gathered and matched against a unit of competency to provide proof of competency. Evidence can take many forms and maybe gathered from a number of sources.

In a competency-based system, evidence is something which supports the candidate's claim of competency or achievement of competency according to standard, learning outcome or performance outcome.

Forms of Evidence

Evidence of competency can take many forms. The forms of evidence required will depend on the purpose of the evaluation and the performance outcomes.

1) Direct Evidence – is evidence that can be observed or witnessed by the facilitator. This may include:

- Observation, by the facilitator of the trainees carrying out the work activities;
- Oral questioning of the trainee;
- Demonstration by the trainee of specific skills needed to complete the task; and
- Evaluation of the actual product.

2) Indirect evidence – is an evidence of the trainee's work that can be reviewed or examined by the facilitator. This may include:

- Video presentation;
- Photographs;
- Written test of underpinning knowledge;
- Review of previous work performed;
- Testimonial or reports from employers, colleagues, clients or supervisors; and
- Evidences of training.

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Ways of Gathering Evidence

- Multiple observations by the assessor of the candidate carrying out work activities;
- Assessment of technical qualities of finished product;
- Written test of underpinning knowledge;
- Oral questioning of candidate;
- Demonstration of specific skills needed to complete the task;
- Review of previous work performed; and
- References from previous employer.

Rules of Evidence

1) Valid

Is the evidence:

- related to the current version of the standards?
- relevant to the elements and performance criteria in the standards?
- consistent with the range of variables and the evidence guide?

2) Current

Does the evidence:

- reflect the trainee's current knowledge and/or skills in the relevant aspect of work?
- establish that the trainee can meet the elements and performance criteria specified in the current version of the relevant standards?

3) Recent

- The evidence shows the latest training attended by the candidate relative to the current version of the Competency Standard.
- Is the evidence less than five years old?
- Presence of proximity or time element

4) Sufficient

Does the evidence:

- cover all the elements?
- meet all the evidence requirements?
- illustrate that the candidate can meet the four dimension of competency – tasks skills, task management skills, contingency management skills, and job/role environment skills?

5) Authentic

- Is the evidence presented the candidate's own work?
- What procedures are available to ensure the authenticity of the evidence:
 - observation of work in progress;
 - declarations;

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- drafting; and
- third party validation?

6) **Consistent**

Does the evidence:

- Show that the candidate consistently meets the standards under workplace conditions rather than showing a one –off demonstration of the standards?
- Incorporate multiple items of evidence?

Rules of evidence must be observed in identifying the evidences included in the assessment tools.

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Self-Check 11.1- 3

Direction: Match the Rules of Evidence (Column B) with its description (Column A).
Write the corresponding letter in the answer sheet provided.

Column A (Description)	Column B (Rules of evidence)
1. The assessor is assured that the assessment evidence demonstrates current competency of the learner. This evidence must be from the present or very recent past.	A. Recent
2. The assessor is assured that the quality, quantity, and relevance of the evidence is sufficient to enable a judgment to be made on the learner's competency	B. Current
3. The assessor is assured that the evidence provided for assessment is the learner's own work.	C. Valid
4. The assessor is assured that the candidate consistently meets the standards under workplace conditions over a period of time	D. Consistent
5. Age of evidence. Recent enough to show that the skills and knowledge are still in practice and able to be applied to a current work situation	E. Sufficient
6. The assessor is given assurance that the learner possesses the skills, knowledge, and attitudes described in the Unit of Competency and related assessment requirements	F. Authentic

Answer Key 11.1-3

Sl. No.	Answer Key 11.1-1
1.	B
2.	E
3.	F
4.	D
5.	A
6	C

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Information Sheet 11.1 -4

Evidence Plan

Learning Objectives:

After reading this Information Sheet, you must be able to develop an evidence plan.

In establishing the evidences, developer should first review the unit of competency to be assessed, specifically the elements, performance criteria, critical aspect, underpinning knowledge and skills.

The Evidence Plan

Evidence plan is designed to:

- serve as a planning tool;
- support the assessment process;
- assist with the collection of evidences;
- inform the learners of what is expected of them before they begin with the assessment; and
- serve as a guide for the trainer in determining the method of assessment to be used.

In making an Evidence Plan the developer should have copy of the competency standards (CS), which is contained in the Training Regulation of the chosen competency; and copy of the Evidence Plan Template.

Steps in Making an Evidence Plan

- 1) From the CS, develop your evidence requirements in reference to the elements and performance criteria, underpinning skills and knowledge and critical aspect of competency;
- 2) Write your evidence requirements on the first column of the Evidence Plan Template. Use the present tense (s-forms of the verb) in constructing the list of evidence requirements.

Below is a Sample Illustration on how to make the evidence Plan based on the performance criteria, underpinning knowledge and skills and critical aspects of a competency.

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Competency Standards	Competency Assessment	
Unit of Competency	Plan Competency Assessment	
Ways in which evidence will be collected: (Tick the column) The evidence must show that the candidate ...	Written report	Portfolio
Identifies work activity to be assessed	✓	✓
Identifies relevant units of competency	✓	✓
Identifies the relevant evidence*	✓	✓
Describes different evidence gathering methods		✓
Selects appropriate evidence gathering methods*	✓	✓
Describes different evidence gathering tools		✓
Selects evidence gathering tools	✓	✓
Prepares evidence gathering tools*	✓	✓
Checks evidence gathering tools*		✓
Identifies evidence gathering opportunities*	✓	✓

Performance

Critical Aspects of

Required Knowledge

Critical Aspects of

Critical Aspects of competency

3) Write the evidence gathering method on the 2nd, 3rd and 4th column along the first row of the Evidence Plan Template. Choose at least two kinds of evidence-gathering methods that would allow you to get the evidence required to determine the competency (You refer to CS/Evidence Guide-Method of Assessment- to determine the method of assessment which industry preferred for a specific competency)

4) Place a check on the appropriate box to indicate what method will be used to gather each evidence requirement;

Title of Qualification		National Skills Certificate in Welding, Leel-1			
Unit of Competency		Perform Spot Welding			
Ways in which evidence will be collected: [tick the column]					
The evidence must show that the candidate...		Demonstration	Written test	Observation with checklist	Portfolio (Third party)
Performs spot*in welds (task management skills)		/			
Knows welding codes (Job/Role environment Skills)		/	/		
Checks gap and alignment* (Task Skills)		/	/		
Applies weld techniques* (task Management Skills)		/	/		
Set-up welding position (Task Skills)		/			

*Critical Aspects of competency

5) Review the Evidence Plan to check that all evidence requirements are covered especially the critical aspects of competency.

Task Sheet 11.1-4

Title: Develop Evidence Plan

Performance Objective: Given the assigned area or competency, the trainee should be able to Develop an Evidence Plan using the required template; and following the set procedure

Supplies/Materials: As per Course Accreditation Document

Equipment:

Procedure:

1. Follow the steps in making the evidence plan from the Information sheet.
2. Use the suggested format and guidelines as reference; and
3. Present the output to the trainers

Template for the evidence plan

Competency Standards				
Unit of Competency				
Ways in which evidence will be collected: [tick the column]				
The evidence must show that the candidate...	Demonstration	Written test	Observation with checklist	Portfolio (Third party)
Element/Performance Criteria (example below)				
1. Interpret TVET scenario of Bangladesh and relevant policy documents				
1.1 TVET terminologies are listed and defined.				
1.2 Relevant policies and laws are accessed and interpreted.				
1.3 Courses and curriculum documents of TVET systems are accessed and identified.				
•				
•				
•				
•				
•				
•				
•				
•				
•				
•				

NOTE: *Critical Aspects of Competency

Prepared by:		Date:	
Checked by:		Date:	

Performance Criteria Checklist 11.1-4

Criteria (Did I?)	Yes	No
1. Identify the Qualification Title		
2. Identify the covered unit of competency		
3. Cover all the required evidences in the prepared Evidence Plan		
4. Use the correct format in preparing an evidence plan		

LEARNING OUTCOME 2: ESTABLISH SUITABLE ASSESSMENT METHODS

ASSESSMENT CRITERIA:

1. Suitable assessment methods are identified that are consistent with the evidence requirements and advice provided in the Evidence guide and relevant Assessment guidelines.
2. Assessment methods are selected which are appropriate for the competency being assessed, and in line with the purpose and assessment context

CONTENTS:

1. Assessment Method

CONDITIONS:

Trainees must be provided with the following:

- Handouts or reference materials/books on the above stated contents
- PCs/printers or laptops with internet access
- LCD/Digital Projector and Screen
- Microphones
- Bond paper
- Ball pens/pencils and other office supplies and materials
- Communication resources
- Workplace or simulated environment

METHODOLOGIES:

- Lecture/discussion
- Demonstration/application
- Presentation

ASSESSMENT METHODS:

- Written test
- Demonstration
- Oral Questioning
- Observation with checklist
- Portfolio.

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Learning Experiences 11.2-1

Learning Outcome 2

ESTABLISH SUITABLE ASSESSMENT METHODS

Learning Activities	Resources/Special Instructions
Identifying Assessment methods	• Read Information sheet 11.2-1. The assessment methods. • Perform Task sheet 11.2-1, refer to performance criteria checklist 11.2-1 to check if you have answered the questions correctly.

Information Sheet 11.2 -1

Assessment Methods

Learning Objectives:

After reading this Information Sheet, you must be able to decide on which assessment methods are fitted in accordance to the required evidences

The developers identify and select appropriate method of assessment taking into account the requirements of the competency, priority of competency, criteria and parameters of assessing the competency, assessment tool, learning method, availability of time and purpose of assessment.

Assessment Method

The assessment methods are the techniques used to gather evidences when assessing a candidate of a particular qualification. The assessment method could be written or performance-based.

Types of Assessment Methods

Methods	Example
Direct Observation	Real work/real time activities at the workplace Work activities in a simulated workplace
Structured Assessment Activities	Simulation exercises/role-plays Projects Presentations Activity Sheets
Questioning	Written questions Interviews Self-evaluation Verbal questioning Questionnaire Oral or written examinations

Evidence compiled by the trainee	Portfolios Collections of work samples Products with supporting documentation Historical evidence Journals/logbooks Information about life experience
Review of products	Products as a result of a project Work samples/products
Third-party feedback	Testimonials/reports from employers/supervisors Evidence of training Authenticated prior achievements Interviews

When the developers identify and select the assessment methods to be used in assessing a particular unit of competency, the developer have to refer on the requirements set for the unit of competency and used it as a guide.

Considerations in identifying the appropriate Assessment Method

In identifying the suitable assessment method, the developer should take into consideration the following:

1. **Required Evidences** – refers to the set evidences or basis in assessing the obtained competence for a particular Qualification.
2. **Evidence Guide**- it is part of a Competency Standard, which serve as a guide in the assessment of the unit of competency in the workplace/or a training environment. The Evidence Guide specifies the context of assessment, the methods of assessment, the critical aspects of competencies, and the required or underpinning knowledge and skills. It relates directly to the performance criteria and range variable defined in the unit of competency and provides list of information on:
 - When should the evidences be collected;
 - The ways of collecting evidences; and
 - Whether a specific time is allotted in collecting evidences.

The information is provided in order to:

- Cover all aspects of the unit of competency;
- Determine whether it is necessary to collect evidences in a particular manner and over a period of time; and
- Establish consistency in the performance.

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3. Assessment Guidelines - are endorsed component of a Training Package/Assessment Tools which underpin assessment and which set out the industry approach to valid, reliable, flexible and fair assessment. It includes the assessment system overview, assessor requirements, designing assessment resources, conducting assessment and sources of information on assessment.

Considerations in Selecting Assessment Method

To make sure that the appropriate method is selected, the developer should consider and have clear understanding of the following:

1. **Determine competency to be assessed**, the list of identified evidences in the CS should be analysed and categorised. Below are the sample techniques in identifying the suitable method based on the target competency to be assessed.

Target to be assessed	Assessment Method			
	Written Assessment		Performance Assessment	
	Multiple Choice, True/false, Matching type/Definition of Terms	Essay	Observation and Demonstration	Performance test Interview/Oral Questioning
Knowledge Mastery	Good match for assessing mastery of elements of knowledge	Good match for tapping understanding of relationships among elements of knowledge	Not a good match -too time consuming to cover everything	Can ask questions, evaluate answers and infer mastery – but a time-consuming option
Reasoning efficiency	Good match only for assessing understanding of some patterns of reasoning	Written descriptions of complex problem solutions can provide a window into reasoning proficiency	Can watch students solve some problems and infer reasoning proficiency	Can ask student to “think aloud” or can ask follow-up questions to probe reasoning
Skills	Not a good match. Can assess mastery of the knowledge pre-requisites to skillful performance, but cannot rely on these tap the skill itself		Good match can observe and evaluate skills as they are being performed	Strong match when skill is oral communication proficiency; otherwise, not a good match

Ability to create products	Not a good match. Can assess mastery of knowledge of prerequisite to the ability to create quality products, but cannot use to assess the quality of products themselves	Strong match when the product is written. Not a good match when the product is not written	Good match. Can assess the attributes of the product itself.	Not a good match
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2. **Purpose** of Assessment, which includes the following:

- Recognise current existing competency of candidate/s
- Determine if competency has been achieved
- Determine the training gaps
- Meet organisational requirements
- Measure work performance
- Clarify employees/support career development
- Certify competence

2. **Context of Assessment**

- The environment in which the assessment will be carried out
- Opportunities for collecting evidence
- Relationship between competency standards and work activities in the workplace
- Quality assurance mechanism
- Period of time which the assessment takes place

3. **Legal and Ethical Responsibilities**

- Adhere to occupational and safety requirements
- It must adhere to the quality policies and systems
- Confidentiality must be observed
- Assessor must have integrity

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- Accurate recording and transparency in reporting

4. Reasonable Adjustments

- Designed to ensure that all people are treated equally in the assessment process
- Must not compromise the integrity of the competency standards

e.g. Cultural differences, physically challenged individuals, gender issues, and language

Task Sheet 11.2-1

Task Sheet 11.2-1
Title: Select Assessment Method
Performance Objective: Given the developed Evidence Plan, the trainee must be able to select the method of assessment based on the identified criteria, following the set guidelines in selecting assessment method.
Supplies/Materials: Competency Standard & CADs, Competency based curriculum (CBC) and bond paper.
Equipment: PC, printer with ink,
Steps/Procedure: • Analyse the criteria identified in the evidence plan; • Using the guidelines in selecting assessment methods, identify the methods that would suit in assessing the evidences • Mark or check assessment methods for each of the evidences; and • Present the output to the trainer.

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Performance Criteria Checklist 11.2-1

Sl. No.	Criteria (Did I?)	Yes	No
1	Identify different assessment methods		
2	Mark assessment methods that would assess the criteria		
3	Use check (/) in marking the assessment methods.		
4	Use the correct format in preparing an evidence plans		

LEARNING OUTCOME 3: PREPARE ASSESSMENT TOOLS

ASSESSMENT CRITERIA:

1. Assessment Tools are prepared in accordance with the advice provided in the relevant Assessment Guidelines.
2. Clear and concise written instructions and materials are prepared for the assessor and the candidate which accurately describe the assessment activity.
3. Assessment tools are checked for validity, fairness, safety and cost effectiveness.

CONTENTS:

- Assessment Tools
- Written test
- True or False Questions
- Matching type questions
- Multiple Choice Questions
- Performance Assessment Tool

CONDITIONS:

Trainees must be provided with the following:

- Facilities and equipment relevant to the activity
- Resources and materials relevant to the activity
- Time to accomplish the activity

METHODOLOGIES:

- Lecture/discussion
- Demonstration/application
- Presentation

ASSESSMENT METHODS:

- Written test
- Demonstration
- Oral Questioning
- Observation with checklist
- Portfolio.

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Learning Experiences 11.3-1

Learning Outcome 3

PREPARE ASSESSMENT TOOLS

Learning Activities	Resources/Special Instructions
Prepare the content of the assessment tool	• Read Information sheet 11.3-1. The assessment Tools. • Perform Task sheet 11.3-1, refer to performance criteria checklist 5.3-1 to check if you have answered the questions correctly.
Preparing the Table of specifications	• Read Information sheet 11.3-2. The Written Test. • Perform Task Sheet 11.3-2. Refer to the Performance Criteria Checklist 5.3-2 to check for your answer
Writing the Written Test Questions	• Read Information Sheet 11.3-2A. Written Test: True or False Questions • Perform Task Sheet 11.3-2A • You may have your output checked by your trainer, or you may refer to the performance criteria checklist • Read Information Sheet 11.3-2B • Perform Task Sheet 11.3-B • Read Information Sheet 11.3 – 2C. Written Test: Multiple Choice Questions • Perform Task Sheet 11.3-2C • Refer to performance criteria checklist 5.3-2C
Preparing the Performance Assessment Tools	• Read Information Sheet 11.3-3. Performance Assessment Tool. • Perform Task sheet 11.3-3 • Refer to the performance criteria checklist to check your output.
Determining the characteristics of the assessment tool	• Read Information Sheet 5.3-3 • Answer Self-check 11.3-4 • Refer to the answer key for your answer

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Information Sheet 11.3-1

Assessment Tools

Learning Objective:

After reading this Information Sheet, you must be able to develop a content of the assessment tool.

Once the developer defined the evidence requirements and decided on the assessment method to be used, the next step is to design and develop the corresponding assessment tool. The developer should know relative documents that comprise the assessment tool and the type of assessment tool that would address the identified assessment method.

Assessment Tools

Assessment Tools also known as ***evidence gathering tool***, contains both the instrument and the instruction for gathering and interpreting evidences.

The assessment tools to be designed and develop must comply with the rules of evidences defined in the previous Information Sheet.

Contents of Assessment Tools

1) Instruction

These are the information/procedures given to candidate or assessor regarding conditions under which the assessment should be conducted and recorded. Instructions should response to the questions regarding the ***what, when, where, how, and why*** of the assessment processes. It should also provide candidate's the correct information which will serve as their guide.

Instruction could be included in the instruments or in a separate document.

Sample Instructions:

For Written test:

- Read the directions carefully.
- **DO NOT WRITE ON THIS TEST BOOKLET.** Write your answers on the answer sheet provided. Use capital letter only. Example: 1. B
- You have 2 hours to complete this institutional evaluation tool. Once you are finish, you may hand in your paper to the facilitator

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For Performance Test:

- Assessment method is taken from the units of competency in the Training Regulation on the Evidence Plan
- Performance of the task should be completed within 6 hours.

Sample List of supplies, materials, tools and equipment:

Supplies/Materials	Tools	Equipment
Work Area		

2) Instrument

It is the specific questionnaires or activity/ies developed based on the selected assessment method to be used for assessment.

The following information should also be covered and considered in preparing instructions:

1. Reasonable adjustments
2. Resources
3. Grading
4. Method of Assessment
5. Assessment Conditions

Purpose of Assessment Tools

The purposes of the Assessment Tools are the following:

- a) To help the candidates understand what is expected;
- b) To keep focus on the evidence gathering to be facilitated by the assessor;
- c) To record evaluation outcome; and
- d) To identify the required actions necessary to address the skills and knowledge gaps.

The assessment tool gives shape and form to the chosen assessment method. It requires a lot of analysis before a developer could decide what specific tool will be suitable for a particular method.

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Below are the different assessment method and the corresponding assessment tool that will be used in assessing the candidate's acquired knowledge, skills and attitude.

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Assessment Method and its corresponding Assessment Tools

Assessment Method	Assessment tool	Description	When to use
Written Assessment			
1. Written test	a) Multiple Choice Item b) Essay c) True/False Question d) Matching Type e) Completion Type	- An assessment intended to measure a trainees/candidate's knowledge, skills, aptitude, physical fitness, or classification in many other topics. - May include multiple choice items, true/false, matching type items, essays, completion type and written simulations.	- Useful for easy administration to a large number of students, especially where marking is to be done by an assistant rather than the trainer/assessor. - Computer marking and web-administered test are well established. - Effective for testing sheer knowledge and memory; and for problem solving in convergent subject areas.
Performance Assessment			
2. Interview/Oral Questioning	Interview Questioning Tool	- It contains questions which are designed to test one or more specific skills. The answer is then matched against pre-decided criteria and marked accordingly; - Questions are related to the behaviour in specific circumstances, which they then need to back up with concrete examples; - It aims to gather evidences required for a specific skill; - Two common approaches of Competency-Based interviews:	a) Where there is a need to find out about learning which has not been directly observed: b) It may be about what did not happen. c) Seeking an explanation for particular practices d) Checking understanding of underlying principles e) Challenging practice

		a. Ask a series of questions, targeted at each of the core competencies; and b. Involve in-depth probing questions with the interviewer actively listening for clues which provide evidence that the trainee/candidate possess the necessary skills	• A major selling point for oral questioning concerns inclusivity. If the principle followed that it is directly relevant to the task, use assessment method which calls for additional skills. • The major role for the “oral” in summative assessment is in language learning where the capacity to carry on a conversation at an appropriate level of fluency is relatively distinct from the ability to read and write the language
3. Portfolio Assessment	Trainee’s/ Candidates, Portfolio Record Sheet	• It contains individual pieces of evidence demonstrating work outputs collected by the trainee/candidate. The items are usually produced over a period of time and came from different sources • Captures a rich array of what a trainee/candidate knows and can do in a broad range of competencies. • Promotes reflective practice (learning from experience). • Provides an autobiography of a trainee’s/candidate’s growth. • A well-constructed portfolio incorporates a selection of evidences that is clearly benchmarked against the relevant unit(s) of competency and indicates consistent	• Useful in Recognition of Prior Learning (RPL). The portfolio consists of evidences assembled to show how the trainee can achieve specified learning outcomes or satisfy the assessment criteria • Valuable for the assessment of vocational or professional practice – including work experience placements – often in conjunction with direct observation

		performance of work activities in accordance with workplace standards.	
4. Observation	Rating sheet for demonstration/observation with oral questioning	• Watch someone doing something to see if they can do it properly, it is recommended default form for competency-based programmes.	• Useful for assessment of practical skills, which can be demonstrated through performance • When the picture of competence is developed within a workplace context, it is easy to find opportunities for observing work performance
5. Demonstration	Rating sheet for demonstration/observation with oral questioning	• It involves observing the candidate in completing or dealing with a task, activity or problem in an off-the-job situation that replicates the workplace context	• Wherever there is a need to move closer to the reality of practice: where the text-based case study does not convey the urgency of decision-making • Wherever there is a need to move away from the reality of practice: on competency-based programmes, for example, there may be little opportunity for direct-real-life observation of dealing with an aggressive client or patient, health or safety emergency, or particular kind of equipment fault.

Task Sheet 11.3-1

Task Sheet 11.3-1
Title: Write instruction
Performance Objective: Given the assigned competency/occupation, the trainee should be able to write an instruction for written test and performance test
Supplies/Materials: Competency Standard, Course Accreditation and Competency based curriculum (CBC), bond paper etc.
Equipment: PC, printer with ink,
Steps/Procedure: 1. Prepare an instruction for a written test and performance test. 2. Use your assigned occupation for this activity. 3. Present the output to the trainer.

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Performance Criteria Checklist 11.3-1

Sl. No.	Criteria	Yes	No
1	Does the instruction provide clear information on how to complete the assessment?		
2	Does it explain the What, where, When Why and How?		
3	Does it provide information on the reasonable adjustments?		
4	Are the resources needed for the assessment stated in the instruction?		
5	Are the methods of assessment to be used described?		
6	Are there assessment conditions provided?		

Information Sheet 11.3-2

Written Test

Learning Objectives:

After reading this Information Sheet, you must be able to develop a table of specifications and make a written test.

The first step when you are developing a written test is to identify whether the test is a subjective or objective type of test, and to determine the approach you will be using in evaluating the responses of the candidates.

Subjective Test

Test are said to be subjective if the scoring is influenced by the judgement of the scorer. Such tests include essays, as well as short answer questions and most oral tests. Subjective test and essays are useful when the trainee is to describe a “process”, such as combustion, a billing procedure, or a parts-ordering system.

Objective Test

Test are said to be objective if scoring is applied consistently so that it does not permit the scorer to bring judgement to bear on individual examinations. Such tests include multiple-choice, completion, true or false, and matching test. They examine only those learning goals pertinent to the area of competence in question.

No test is entirely objective. Subjectivity is present in the preparation of an objective test, but it is present in both the preparation and the scoring of the subjective test.

Norm-referenced evaluation

When the performance of one student is compared with the performance of the others and a judgement is made on the basis of that comparison, a norm-referenced evaluation is being made. Thus, when we say Trainee A is above average and Trainee B is below average, we have made a norm-reference evaluation.

Criterion-reference evaluation

When we compare trainees’ skills not with those of other trainees but with some objective standard of performance, we are making a criterion-reference evaluation. Suppose we ask a trainee to identify correctly 18 out of 20 symbols on a blueprint and the trainees identifies 15. Two kinds of evaluation ca be made:

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- a) Norm-referenced – Trainee B did better than anyone else in the class; give him an “A”, or
- b) Criterion-referenced – Trainee B did not meet the criterion of 18; give him more instruction.

When you want to know whether a performance objective has been achieved, only-criterion referenced procedures are appropriate. A training objective is a description of knowledge and skill standards you want the trainee to reach or surpass. A criterion-referenced test will help you decide whether the trainee has achieved the objective. You cannot measure trainee achievement with accuracy if you are not certain of exactly what it is you are measuring.

The purpose of a criterion-referenced test is to determine how well the trainees’ performance at the end of the period of instruction (a single unit, several lessons, or the entire course) matches the performance called for in your course objectives. The test is to help you determine whether the trainees can perform as required; it is not designed so that a portion of them will fail.

If a lesson is planned to teach the trainees to clean and replace the spark plugs of an automotive in five minutes, the test item should ask them to do exactly this. If all trainees can do it, you don’t make the test item easier; you improve the instruction. Your job is to teach trainees, not to fail them.

Constructing a criterion-referenced test

- 1) Use the performance objectives or list of competencies as your guide. If these are clearly phrased and require performance of observable (e.g. assemble, calculate, define, design, list, and repair) you will know what kind of test item is required.
- 2) Prepare as many items as are necessary to discover how well the trainee meets the objective. In some cases, several items will be needed to make the assessment.
- 3) Create items that call for the same kind of performance as specified in the objective. If the objective specifies the use of a certain tool, the trainee should use it; rather than write an essay about it, the trainee should talk. If it specifies repairing something, the trainee should repair.
- 4) Make certain the test item clearly reflects the conditions and the minimum standards of the objective. For example, if your objective is for the trainee to be able to clean and replace the spark plug without asking for help (condition) during the test, the trainee may not ask for help. If the time limit of five minutes (standard) is stated in the objective, it must be used in the test.
- 5) Decide upon the type of written test to used

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If Objectives tested are:	Appropriate test items include:
Knowledge Level	Matching Type True or false Multiple Choice Completion Essay
Application Level	True-False Completion Multiple Choice Essay Written Simulations
Problem-solving Level	Multiple Choice Essay Written Simulations

The recommended number of knowledge-test items per employable competency is 40 to 60. These should be mostly multiple-choice items. Limit Matching Type items to no more than 20% of the items, since Matching Type only measures factual or recalling type.

Once you are decided with the design of your written test the next critical step is for you to construct the table of specifications. This will be your blue print in constructing individual test items.

The developer must be reminded that the table of Specification represents the number of questions that must be reflected in the test. But, in the phase of formulating the questions the developer must develop more than the required items. This is to make sure that after the item analysis he/she will be able to obtain the established number of items.

Making a Table of Specifications will help the trainer easily identify the number of questions appropriate for the required evidence. This will ensure that necessary evidences will be collected using the tools.

Construct test items more than the number required for a set of Assessment Instrument. This will facilitate item banking and will give an allowance for correction when the test items will be deliberated whereby some items might be deleted.

Parts of the Table of Specification

1) Area/Article – pertains to the target area to be measured. It could be a specific learning outcome or a unit of competency.

2) Category of Cognitive Domain –the identified type of knowledge/skills to be measured.

The test items are classified into three categories:

Type I – designates a factual knowledge, this particular type, tests the recall of an important piece of factual knowledge:

Type II – calls for comprehension; and,

Type III – denotes the application of certain principles or skills. Of these three types of test item categories, Type III is the highest type of knowledge test which requires a more thorough understanding on the part of the examinee.

Test developers often find that allocation of a type of knowledge to a particular item is a difficult stage. It may be helpful to remember that:

1. One should concentrate on deciding what needs to be tested;
2. The knowledge categories are hierarchical, if an item is testing the application category, it will at the same time be testing the two lower categories, factual knowledge and comprehension (Types I and II);

A key consideration in test development is the construction of test items that are reflective of all level or categories.

- Type I (Factual/Knowledge) – recognition and recall of facts
- Type II (Comprehension) - interpret, translates, summarizes or paraphrase given information
- Type III (Application) - uses information in a situation different from original learning context

The examples of different types of test categories are given below:

- 3) No. of items – allotted number of questions for each area/article. The number of items depends on the number of evidences required in a specific learning outcome or unit of competency.
- 4) Item Placement – indicates the place/number where the questions on the corresponding category of cognitive domain are placed.
- 5) Percent of Item – percentage of questions determined in every component.

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Steps in Preparing a Table of Specification

1. Identify the area/article or evidences to be measured;
2. Define the type of knowledge that will be evaluated;
3. Set number of items required for every component (if the test will be developed by more than one person, the consensus of each member is necessary in identifying the number of items);
4. Define where the test item will be placed; and
5. Compute for the percentage of each component.

A sample Table specification for Plan Training Sessions

Area/Article	Category of cognitive domain	No. of item	Item Placement	Percent of item
1. Determine Trainee's training requirement	Knowledge	10	1-10	12
	Comprehension	5	11-15	5
	Application	5	16-20	5
2. Prepare a session plan	Knowledge comprehension	5	1,5,6,8,9	6
		5	2,3,4,7,10	6
3. Prepare basic instructional materials	Knowledge comprehension	5	2,5,8,9,10	6
		10	1,3,4,6,7,11-15	12
4. Prepare assessment instrument (institutional)	Knowledge	5	1-5	6
	comprehension	10	6-15	12
	Application	5	16-20	6
5. Organize learning and teaching resources	Comprehension Application	10	1-5, 9,11,12,	12
		10	13	12
			6,7,8,10,14-20	
		85		100

Source: National TVET Trainlines Academy. Marikina City, TESDA

Checklist for evaluating criterion-referenced test

Adequacy Of The Plan	YES	NO
1. Does the test plan include a detailed description of the instructional objectives and the content to be answered?		
2. Does the test blueprint truly indicate the relative emphasis to be given to each objective and each area of content?		
3. Is the standard performance reasonable for the learning outcome to be measured?		
Adequacy Of The Test Items		
1. Are the test items appropriate for the learning outcomes to be measured?		
2. Do the test items measure an adequate sample of trainee performance for each type of interpretation to be made?		
3. Do the test items present clear and definite tasks to be performed?		
4. Are the test items free from nonfunctional materials?		
5. Are the test items appropriate for the learning outcomes to be measured?		
6. Are the test items free from technical defects (clues, ambiguity, and inappropriate reading level)?		
7. Is the answer to each item agreed upon by experts?		
8. Are the items of each type in harmony with the rules of constructing that item type?		
Adequacy Of Format		
a. Are the test items that measure the same instructional objective grouped together in the test?		
b. Are the test items arranged in order of increasing difficulty within each section of the test as a whole (to the extent possible)?		
c. Does the item lay-out of the page contribute to the ease of reading and ease of scoring?		
d. Are the test items numbered in consecutive order?		
e. Are specific, clear directions provided for each section of the test as a whole?		

Task Sheet 11.3-2

Task Sheet
Title: Prepare Table of specifications
Performance Objective: Given the assigned area or competency, the trainee should be able to prepare a Table of Specifications using the required template and following the given procedures.
Supplies/Materials: Competency Standard, Competency Based Curriculum (CBC), Related Materials or References, CBLM
Equipment: PC, printer with ink, bond paper
Steps/Procedure: Follow the steps in making a Table of Specifications. Use the suggested Table of Specifications Format. Present your output to your facilitator.

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Performance Criteria Checklist 11.3-2

Criteria (Did the output....)	Yes	No
1. Cover all the required areas/articles or evidences required in the assigned qualifications that is necessary in developing a Table of Specifications?		
2. Identify the required knowledge and number of items allotted accordingly?		
3. Use the correct format in preparing a Table of Specification?		
4. Compute the percentage for each category correctly?		

Information Sheet 11.3-2A

Written Test: True or False Questions

Learning Objectives:

After reading this Information Sheet, you must be able to:

1. Determine the guidelines in constructing questions answerable by “true or false”; and
2. Develop True or False questions.

True/False question is a written test, which asks the candidate to confirm or deny a statement by selecting true or false. They are good testing factual knowledge.

Advantages:

- Test a large amount of material in a short time and are easy to assess.
- True-false items are good for learners who are poor readers.
- Adaptable to most content areas.
- True-False items are particularly suitable for testing beliefs in popular misconceptions and superstitions.
- If carefully constructed, it can measure the higher mental processes of comprehension, application, interpretation and problem solving.
- These test items can be marked quickly, reliably and objectively by people who need not be content experts.

Limitations:

- True-False items give the candidate a 50-50 chance of getting the right answers.
- Test facts, not the application of facts.
- Are not always easy to write (poorly phrased questions can confuse the candidate).
- May only test trivia.
- Candidates' scores on true-false tests may be unduly influenced by good luck or bad luck in guessing.
- True-False items are more susceptible to ambiguity and misinterpretation than any other selection-type objective item. This possibly results in low reliability.

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- These items lend themselves most easily to cheating. If a learner knows that he is to take a True-False test, it takes little effort to work out a system in which a better candidate signals the correct answer to another candidate.
- With True-False items, candidates tend to develop a pattern of responding TRUE somewhat automatically, without really giving thought to the item.
- Many True-False items require qualifying statements to make them completely true or false. These qualifiers provide irrelevant clues to the correct answer.

What a True-False Item Can Measure

1. Many of the criticisms of True-False items are more the fault of the item writer than the item format. You need special skills to write valid True-False items.

2. True-false items are versatile, as illustrated by the examples below:

(A) Testing for factual knowledge

e.g.: Kidney failure is characterised by swelling of the limbs.

(B) Testing for comprehension

e.g.: Potential energy is found in a wound spring.

(C) Testing for application

e.g.: If heat is supplied at a constant rate to vaporise a substance, the temperature of the substance will also increase at a constant rate.

(D) Testing for problem-solving ability

e.g.: Given the general gas law $PV/T = k$,
Where $k=2$; $P=5$; $T=50$ C then $V = 20$.

Guidelines for Constructing Effective True-False Items

- 1) Use True-False items only when there is a clear-cut true or false answer to the question;
- 2) Construct items that are entirely true or entirely false;
- 3) Avoid using specific determiners, i.e. **“never”, “always”, generally** (Statements that include all or always are usually false, those including sometimes are usually true.);
- 4) Rephrase textbook and lecture material rather than quoting it directly;

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- 5) State items positively rather than negatively. If a negative statement is used, highlight or underline words like **NO or NOT**;
- 6) Construct approximately equal numbers of true or false statements and avoid setting up an answering pattern;
- 7) Avoid testing for trivial details;
- 8) If a controversial statement is used, quote the authority;
- 9) Avoid using ambiguous words and statements such as **MORE, FEW, HEAVIER and LIGHTER**. They may be interpreted differently by different people. Use quantitative rather than qualitative terminology;
- 10) Avoid having "**trick**" questions. "Trick" questions affect the validity of a test;
- 11) When testing for cause-and-effect relationship, always make the first proposition in the statement true and the second part (reason or explanation) either true or false;
- 12) Word the item so that superficial knowledge suggests a wrong answer;
- 13) Make the wrong answer consistent with a popular misconception that is totally irrelevant to the item; and
- 14) Write clear instructions on how the student should indicate his choice of answer.
e.g.: *Read the statement. Circle T if it is true. Circle F if it is false*

Task Sheet 11.3-2A

Task Sheet 11.3-2A
Title: Develop True-False Questions
Performance Objective: Given the assigned area/competency, the trainee should be able to develop TRUE-FALSE Questions, following the guidelines.
Competency Standard, Course Accreditation Document, Competency Based Curriculum (CBC), Related Materials or References, CBLM
Equipment: PC, printer with ink, bond paper
Steps/Procedure: Analyze the guidelines in developing True-False Questions; Develop 10 True-False Questions of the assigned are/competency Present the output to the facilitator

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Performance Criteria Checklist 11.3-2A

Criteria	Yes	No
1. Are the items clearly represented?		
2. Are the items based on statements that are absolutely true or false without further qualification or exception?		
3. Is the central point of each question has been highlighted by placing it in a prominent position?		
4. Are the items free from qualifiers, absolutes, and ambiguous words which might give clues?		
5. Are the test items free from qualifiers, absolutes, and ambiguous words which might give clues?		
6. Are Tricky questions avoided?		
7. Are negative questions avoided?		
8. Does each item contain only one distinct idea?		

Information Sheet 11.3-2B

Written Test: Matching-Type Questions

Learning Objectives:

After reading this Information Sheet, you must be able to:

1. Determine the guidelines in developing matching type of test; and;
2. Develop matching type questions.

Matching-type questions require the trainee/candidate to match one set of information with corresponding information in another set of information.

Matching-type questions have the same limitations and benefits with that of the multiple-choice questions. They are often used to match terms with definitions, phrases with other phrases, causes with effect, parts with larger units and problems with solutions.

Advantages:

- Are valuable in content areas where there are a lot of facts.
- Can cover a lot of information in one question.
- Are good for discriminating between items.
- Test items can be marked easily. The marker need not be an expert in the subject.

Limitations:

- Need instructions carefully and clearly worded;
- Can be difficult to construct;
- If not carefully prepared, the matching lists may encourage serial memorization rather than association;
- The matching exercise encourages rote learning as it can be used to measure only factual information.

Formats for Matching-type Exercise

1. There are four (4) ways of presenting the matching-type exercise. They are:
 - traditional format
 - diagram format
 - classification format
 - sequence format
2. The traditional format consists of two (2) columns. One column consists of problems (premises) and the other of answers (responses). The candidate is required to match each premise with each response.
3. In the diagram format, the candidate is given a diagram of an item of equipment with its parts numbered and a name list of the parts. He is required to match the name of a part with the number on the diagram.

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4. In the classification format, the candidate is presented with a list of homogeneous items (eg plants) and a classification scheme (eg types of plant). He is required to classify each homogeneous item according to the scheme.

5. In the sequence format, the steps for doing a certain job are presented in a jumbled order. The candidate is required to arrange them in the correct sequence.

Possible Relationships for Matching

1. The matching exercise can be used to measure relationships in a variety of fields. Some of these relationships are given below:

- | | |
|------------------|-------------------|
| • Persons | Achievements |
| • Dates | Historical events |
| • Terms | Definitions |
| • Rules | Examples |
| • Symbols | Concepts |
| • Authors | Title of books |
| • Machines | Uses |
| • Plants/Animals | Classifications |
| • Principles | Illustrations |
| • Objects | Names |
| • Parts | Functions |

Example

Column A contains a list of characteristics of metals. In the bracket to the left of the statement, write the letter of the metal in Column B which fits the statement. You may use a letter in column B once, more than once, or not at all.

Answers	Column A	Column B
	1. A reddish brown colour metal which is high conductor of electricity	A. Stainless Steel
	2. Has high tensile strength and low cost for making machine components	B. Bronze
	3. Light in weight and used in making aircraft bodies	C. Mild Steel
	4. A ferrous metal which withstands corrosion	D. Aluminum
	5. It is a mixture mainly of two metals one of which is tin	E. Copper
		G. Silver

Guidelines for Constructing Effective Matching-Type Items

- 1) Keep the list to a short but challenging length. Experts disagree on the optimal number of items, citing anywhere from 5 to 20. Most experts prefer a list of 10-12 items;
- 2) Construct homogenous lists, i.e., all anatomical terms and corresponding body parts. Homogeneity in the list makes it more difficult for the students to guess. Thus, it provides you with a better assessment of the effects of your instruction;
- 3) Label each list according to its content. Devising an appropriate label will force you to develop homogenous lists;
- 4) Arrange the premises and responses in a logical sequence, i.e. alphabetical, chronological, and spatial.
- 5) Create an imperfect match, with one list containing more times than the other. This practice prevents the trainees from answering by process of elimination. It also protects the trainees from the double penalty which results when there are equal numbers of premises and responses and each response is to be used only once;
- 6) Make the directions explicit. The trainee/candidate should be told whether they may use an item more than once or not at all;
- 7) Keep the response brief. Each response must be read a number of times as the trainees complete the exercise. Time spent rereading long, complicated responses would be better spent in responding to additional items, providing a broader sample of the trainee's learning;
- 8) Avoid grammatical clues;
- 9) Put the problems in the premise column on the left-hand side of the page and the answers in the response column on the right-hand side of the page, to facilitate easy reading from left to right;
- 10) Keep each list of items in a single matching exercise relatively short. The number of premises and responses in each list should ordinarily range from 5 to 12. It is generally difficult to maintain the homogeneity of material if the list is too long. Also, it is very tedious for the candidate to go through an excessively long list;
- 11) Avoid having an equal number of premises and responses. To reduce the chances for successful guessing, have 2 or 3 more responses than premises;
- 12) Arrange the responses in some systematic fashion. Words should be listed in alphabetical order; dates and numbers in either ascending or descending order;
- 13) Check that every response is a plausible answer to every premise in a single matching exercise. This is to minimise the opportunity for successful guessing;
- 14) Maintain grammatical consistency. Use all proper names or all common nouns; all singulars or all plurals, mixing the list may provide unintended clues;
- 15) Place all of the items for one matching exercise on the same page so that the candidate can scan the responses with ease; and
- 16). Give clear instructions on how each match is to be made.

e.g. In the bracket to the left of each function in Column A, write the letter of the component in Column B which fits the statement. You may use a letter in Column B once, more than once, or not at all.

Task Sheet 11.3-2B

Task Sheet 11.3-2B
Title: Develop Matching Type Questions
Performance Objective: Given the sample assessment tool you should be able to analyse whether the samples meet the set performance criteria.
Supplies/Materials: Module on Developing Competency Assessment Tools
Equipment: PC, printer with ink, bond paper
Steps/Procedure: Analyze the guidelines in developing Matching Type Questions; Develop 10 Matching Type Questions of the assigned area/competency; Present the output to the facilitator

Performance Criteria Checklist 11.3-2B

Criteria	Yes	No
Are the responses homogenous?		
Is the basis for matching clearly indicated in the direction?		
Are the items free of verbal or grammatical clues?		
Are there additional responses so that guessing by elimination is precluded?		
Are the longer, more complex statements used as premises; and the shorter statements used as responses?		

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Information Sheet 11.3-2C

Written Test: Multiple Choice Questions

Learning Objectives:

After reading this Information Sheet, you must be able to:

1. Determine the guidelines in constructing multiple choice items; and
2. Develop multiple choice questions.

Multiple choice questions require the candidate to select a correct response from a number of given responses. The multiple-choice question contains a “stem” and a number of possible “options”.

The stem is either a question with grammatically correct options or a statement with grammatically correct completions as options. Multiple choice questions can ask for the right answer, the best answer or for a sentence to be completed.

Anatomy of Multiple-Choice Items

1. The multiple choices item consists of 2 parts: the stem which contains the problem, and a list of suggested answers (responses or Options). The candidate is required to read the stem and then select the best or correct answer from the list of responses. The correct answer is called the key. The incorrect responses are called distractors.
2. The stem of an item should pose the question clearly and in full and require candidates to show mastery of the objectives. It should be written so that knowledgeable candidates who are shown the item with the options covered over will be able to supply the answer, or at least be able to describe the range of possible answers.
3. The stem may be written as a direct question or an incomplete statement. The direct question format is generally preferred because it is easier to write and reduces the possibility of given grammatical clues. The example in the next page shows the different formats of a multiple-choice item.

Example 1: What is the color of the Red Sea?

Example 2: The color of the Red Sea is

- (A) Red ----- distractor
- (B) yellow ----- distractor
- (C) Green ----- distractor
- (D) Blue ----- Key

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Advantages:

- Are very effective for testing knowledge and the application of knowledge.
- Are versatile and can be used in a number of situations to measure the candidate's ability to recall facts, to reason, and to exercise judgement.
- Require a minimum of writing for the candidate.
- Reduce the opportunity for guessing.
- Can cover a broad range of information and knowledge.
- Test items can be marked quickly and accurately. The marker does not have to be a content expert.
- The multiple-choice test is relatively more efficient than the essay question in terms of the number of questions that can be asked in a prescribed time, and the space needed to present the questions.

Limitations:

- Multiple choice items are difficult to construct. It is not easy to think of plausible distractors.
- The multiple-choice test requires time to respond, especially when very fine discriminations have to be made.
- The multiple-choice test cannot measure a trainee's/candidate's ability to organize and present ideas.

Guidelines for Writing Multiple Choice Items

1. Ensure that the stem of the item is meaningful by itself and presents a definite problem. The trainee/candidate should be able to understand what is expected of him when he reads the stem before he begins reading the responses.

Example: A resistor is an electrical component that

- (A) is an element of the DC motor.
- (B) is used to limit the current flow in a circuit
- (C) can be measured using a insulation tester.
- (D) will have its resistance increase when the length increased.

2. Avoid repetition of words in the options. The stem should be written to incorporate key words. This saves the candidate reading time and helps to focus his attention on the problem. Look at these examples:

Example: According to Lenz's Law, when an emf is induced in a circuit,

- (A) the current set up always aids the induced emf.
- (B) the current set up always opposes the induced emf.
- (C) the current set up always aids the motion which produces it.
- (D) the current set up always opposes the motion which produces it.

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Example: According to Lenz's Law, when an emf is induced in a circuit, the current set up always

- (A) aids the induced emf.
- (B) opposes the induced emf.
- (C) aids the motion which produces it.
- (D) opposes the motion which produces it.

3. Use clear and concise words. The stem should be easy to read and understand, and free of elaborate explanations. Compare these examples of question stem:

Example: According to Tuckman's model, groups develop through several stages over time. Furthermore, it contradicts Poole's activity-track model which has groups switching among several different linear sequences. Which of the following is not one of the stages identified in Tuckman's model?"

It can be better written as:

Tuckman's model of group development includes

4. Avoid using a negatively-stated item stem as far as possible. A negatively-stated item stem tends to measure insignificant learning outcomes and confuse the candidate. If it cannot be avoided, the negative word should always be highlighted.

Example: Which one of the following is **NOT** an inert gas?

5. Ensure that all of the options are grammatically consistent with the Stem of the item. This is to prevent giving unintended clues to the candidate.

Example: Which one of the following publications is considered to be a prime source for research articles on achievement testing?

- (A) Journal of Educational Psychology
- (B) Journal of Educational measurement
- (C) Journal of Clinical Psychology
- (D) Review of Educational research

6. Ensure that all options are plausible and homogeneous with regard to the knowledge being measured. The candidate is then forced to read and consider all the options.

Example: Who was the primary author of the Declaration of Independence? (the answer is B)

- (A) Abraham Lincoln. ----- 16th President of US
- (B) Thomas Jefferson. ----- 3rd President of US
- (C) Alexander Hamilton. ----- US politician
- (D) King George II. ----- King of Great Britain

The options in the example above can be re-written as:

- (A) Abraham Lincoln.

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- (B) Thomas Jefferson.
- (C) Franklin Roosevelt.
- (D) Benjamin Franklin

7. The key must be indisputably correct. Provide only one best or correct answer to every item. As the best answer item is more susceptible to ambiguity, the correct answer item is preferred. Compare these items:

Example: The Republic of Singapore borders on

- (A) Brunei.
- (B) Indonesia.
- (C) Malaysia.
- (D) Philippines.

Example: The immediate neighbour of Singapore is

- (A) Brunei.
- (B) Indonesia.
- (C) Malaysia.
- (D) Philippines.

8. Avoid overlapping options. These create confusion because if one option is correct, another option also has to be correct since one may incorporate the other. Look at these items:

Example: Due to budget cutbacks, the university library now subscribes to fewer than (answer is C)

- (A) 25000 periodicals.
- (B) 20000 periodicals.
- (C) 15000 periodicals.
- (D) 10000 periodicals.

In this case, the candidate would know that (A) is always correct. The options should be re-written as:

Due to budget cutbacks, the university library now limits the subscriptions to between 20000 - 25000 periodicals.

- (A) between 15000 – 19999 periodicals.
- (B) between 10000 – 14999 periodicals.
- (C) less than 9999 periodicals.

9. Place options at the end of the statement when the incomplete statement format is used. The problem should be presented in the stem as early as possible. Compare these examples:

Example: The _____ is used for measuring specific gravity of liquid.

- (A) barometer
- (B) digital meter
- (C) hydrometer
- (D) multimeter

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Example can be re-written as:

The instrument used to measure the specific gravity of liquid is the

10. Avoid verbal associations between the stem and the correct answer. Verbal associations provide irrelevant clues and do not test learning outcomes. Compare the following examples:

Example: What is the best way to locate an attorney for assistance?

(A) contact an attorney referral service

(B) contact a police officer.

(C) look for a newspaper advertisement

(D) wait until you go to jail.

Task Sheet 11.3-2C

Task Sheet 11.3-2C
Title: Develop Multiple Choice Questions
Performance Objective: Given the assigned area or competency, the trainee should be able to develop Multiple Choice Questions following the guidelines.
Supplies/Materials: Training Regulation (TR), Competency Based Curriculum (CBC), Related Materials or references, CBLM
Equipment: PC, printer with ink, bond paper
Steps/Procedure: 1. Analyze the guidelines in developing Multiple Choice Questions; 2. Develop 10 items Multiple Choice Questions of the assigned area/competency; 3. Present the output to the facilitator

Performance Criteria Checklist 11.3-2C

Sl. No.	Criteria	Yes	No
1	Do the questions or incomplete statement give adequate information?		
2	Are the items presented clear and simple?		
3	Does each item have one and only one correct answer?		
4	Are all the possible responses plausible to students who lack the information or skill tested by the item?		
5	Are statements containing double negatives avoided?		
6	Are grammatical, verbal and length-o-response clues avoided?		
7	Are the responses arranged in numerical or logical order?		

Information Sheet 11.3-3

Performance Assessment Tool

Learning Objectives:

After reading this Information Sheet, you must be able to:

1. Define Performance Assessment;
2. Identify the procedures in constructing Performance Assessment Tool; and
3. Develop sample Performance Assessment Tool.

One of the effective ways to find out acquisition of knowledge and skills of an individual is to let the person demonstrate the required skills or give the person questions that will allow confirmation of understanding of the concepts.

Performance Assessment

- It is the formal determination of an individual's job-related competencies and their outcome.
- Performance assessment is typically used to refer to a class of assessments that is based on observation and judgment. In performance assessment an assessor usually observes a performance or the product of a performance and judges its quality or based on standards.
- For example, to judge one's competence to operate an automobile, it is normally required that one passes a road test, during which actual driving is observed and evaluated.
- Performance assessment is accompanied with interview questions which are used during the actual conduct of the test. This is to support the evidences gathered by the facilitator/trainer.
- In assessing the performance of the trainee/candidate, the trainer/assessor used a tool, which covers all the evidences that must be shown by the candidate to be able to pass the assessment. There are different forms of assessment tools used, these are:

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Evidence Plan:

An evidence plan is a document developed by an assessor, often in collaboration with the candidate and the supervisor or technical expert. It includes the units of competency to be assessed, details of the type of evidence to be collected, information regarding who is to collect the evidence and the time period for doing so.

For example, to attain the National Certificate in Welding, Level-1, the candidate must demonstrate competence in all the units of competency listed below. Successful candidates shall be awarded the “National Certificate in Welding, NTVQF, Level-1”.

. Unit Code	Generic Units of Competency
GN 001A1	Use basic mathematical concepts'
GN 1002A1	Apply OSH practices in the workplace'
Unit Code	Sector Specific Units of Competency
TRASS1006A1	Interpret technical drawing'
TRASS1007A1	Work in the manufacturing industry'
TRASS1008A1	Use hand and power tools'
TRASS1009A1	Use graduated measuring instruments ¹
TRASS1009A1	Interpret technical drawing'
Unit Code	Occupation Specific Units of Competency
TRAWEL1011A1	Apply fundamentals of welding metallurgy in the workplace ²
TRAWEL1012A1	Perform spot welding'
TRAWEL1013A1	Perform gas cutting and welding'
TRAWEL1028A1	Perform Shielded Metal Arc Welding (SMAW) for Basic Perform — Positions 1 F, 2F, SF, 4F, IG and 2G'

The sample evidence plan shown in the table below should be customized as specified in the relevant competency standards for the selected qualifications.

Evidence Plan (Exemplar)

Qualification:	National Certificate in Welding, NTVQF, Level-1						
Assessment Centre/Training Centre (RTO):							
Units of competency covered:							
Ways in which evidence will be collected: [tick the column]	Dem onstr	Oral quest	Writt en	Obse rvati on	OM (Oth er	Meth ods	

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The evidence must show that the candidate..... performed or any other verbs in past form as required for gathering evidence (see sample demonstration checklist.					
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***The Above table can be customised and used in accordance with the need and context.**

Evidence Plan (Customised as per requirements)

Qualification	National Certificate in Welding, NTVQF, Level-1				
Unit Code	GN001A1				
Unit Name	Use basic mathematical concepts				
Assessment Process	P	O	W		
	Performance (Demonstration)	Oral Questioning	Written Test		
Unit Code	Elements/Performance Criteria		P	O	W
GN001A1	1. Identify calculation requirements in the workplace				
	1.1 Calculation requirements are identified from workplace information .		/		/
	2. Select appropriate mathematical methods for the calculation		/		
	2.1 Appropriate method is selected to carry out the calculation requirements				/
	3. Use tool/instrument to perform calculations		/		
	3.1 Tools/instruments are used for calculation		/	/	/

Note: Similarly, Evidence plan should be made covering 11 (eleven) units of competency for the “National Certificate in Welding, NTVQF, Level-1”.

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Types of Performance Assessment Tools

1. Demonstration checklist

A tool used when observing performance in a simulated environment, wherein candidate deals with task, activity or problem in an off-the-job situation that replicates the workplace context. A sample Demonstration checklist shown in the table below;

Demonstration Checklist (sample)

Candidate's name:			
Assessor's name:			
Qualification:	National Certificate in Welding, NTVQF, Level-1		
Unit of competency covered:	Perform Spot Welding		
Name of Workplace/ Training Centre (RTO):			
Date of assessment:			
Instructions for demonstration			
Please see attached Instruction for Demonstration (Candidate/Assessor)			
Supplies and Materials ▪ Please refer to attached specific instruction and attached list		Tools and equipment • Please refer to attached specific instruction and attached list	
Given the necessary tools, materials and equipment, the candidate must be able to weld steel plates using SMAW.			
		✓ to show if evidence is demonstrated	
During the Demonstration, did the candidate:		Yes	No
1. perfumed measurement and calculations		☐	☐
2. interpreted technical drawing		☐	☐
3. knew materials and consumables		☐	☐
4. knew welding codes		☐	☐
5. knew welding defects*		☐	☐
6. rectified welding defects*		☐	☐
7. handled materials tools and equipment		☐	☐
8. observed safety practices		☐	☐
9. passed weld visual inspections*		☐	☐
The candidates' demonstration was:	☐ Satisfactory	☐ Not Satisfactory	
Candidate's Signature:		Date:	
Assessor's Signature:		Date:	

*** Marks indicates critical aspects.**

2. Observation Checklist

It is a tool use when observing performance in a real work situation. Watch someone doing something to see if they can do it properly, it is recommended default form for competency-based programmes. A sample Observation checklist shown in the table below:

Observation Checklist

Candidate's name:			
Assessor's name:			
Qualification:	National Certificate in Welding, NTVQF, Level-1		
Units of competency covered:	Units of Competencies:		
Name of Workplace/ Training Centre (RTO):			
Date of assessment:			
Instructions for Observation Sheet			
Procedure to follow	Observe Candidate performing the task, and following the specification- if a specification is provided		
During the demonstration of skills, did the candidate do the following (List steps that reflect critical aspects of the competency):	Yes	No	
• Completed calculations using appropriate method to carry out the calculation	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
The candidates' demonstration was:	☐ Satisfactory	☐ Not Satisfactory	
Feedback to Candidate: Example: Demonstrated lack of confidence in communicating with others although permed assigned job well. Areas of improvements suggested: Mr./Ms. X admitted feeling nervous today and is ok keep practising these skills and attitude. Agreed to a repeat observation in one-month time.			
Candidate's Signature:		Date:	
Assessor' Signature:		Date:	

3. Interviewing/Oral Questioning Tool

It contains questions which are designed to test one or more specific skills. The answer is then matched against pre-decided criteria and marked accordingly. Questions include dimensions of competency, like contingency management skills (*What would you do if?*); job/role environment skills (*What are the procedures and policies for....?*); task skills (*How to prepare....?*) and task management skills (*What are your functions and how do you manage them?*).

Interviewing/Oral Questioning (Sample)

Candidate's name:			
Assessor's name:			
Qualification:	Shield Metal Arc Welding (SMAW), NTVQF, Level-1		
Units of competency covered:	Units of Competencies:		
Name of Assessment Centre/Training Centre (RTO)			
Date of Assessment:			

List of Questions	Satisfactory Response	
Indicate (✓) in the box provided	Satisfactory	Not Satisfactory
1. What are your duties and responsibilities as welder?	☐	☐
2. How will you maintain the good relationship within your environment?	☐	☐
3. Why safety practices are very much important in the manufacturing industry?	☐	☐
4. What will you do to maintain effective interpersonal skill towards the achievement of the goals and objectives of the industry?	☐	☐
5. What will you do when you see a fellow welder felt unconscious while welding in a confined space?	☐	☐
6. How would you avoid electric shock during welding?	☐	☐
7. How would you prevent welding-related injuries?	☐	☐
8. Why is there a need of regular conduct of OSH evaluation in the workplace?	☐	☐
9. How would you prevent the occurrence of slag inclusion and undercut?	☐	☐
10. What will you do when there is too much noise in the workplace?	☐	☐
The Candidate's overall performance was:	☐ Satisfactory	☐ Not Satisfactory
The Candidate's underpinning knowledge was:	☐ Satisfactory	☐ Not satisfactory

Assessor Signature:	Date:
Candidate Signature:	Date:

Oral Questioning Checklist for Spot Welding (Sample)

Candidate's name:		
Assessor's name:		
Qualification:	National Certificate in Welding, NTVQF, Level-1	
Units of competency covered:	Perform Spot Welding	
Name of Workplace/ Training Centre		
Date of Assessment:		
List of Questions	Satisfactory Response	
Indicate (✓) in the box provided	Satisfactory	Not Satisfactory
1. What is the principle and application of spot-welding process?	☐	☐
2. What are the parameters to produce quality weld using spot welding process?	☐	☐
3. What will happen to the material when the carbon content increases?	☐	☐
4. What is the principle and application of spot-welding process?	☐	☐
5. How will you prevent or minimise the occurrence of spatters during spot welding and eventually cause the electrodes to stick to the metal sheets?	☐	☐
The candidate's overall performance was: ☐ Satisfactory	☐ Not Satisfactory	
The Candidate's underpinning knowledge was: ☐ Satisfactory	☐ Not satisfactory	

Assessor Signature:	Date:
Candidate Signature:	Date:

Assessor Job Sheet and Specifications (Spec) Form (Sample)

This Spec is in reference to the _____ Standard, and has been developed by an Industry Representative/Assessor.

The Result* indicates either C for Competent, or NYC for Not Yet Competent.

Unit of Competency	Elements Reviewed	Critical Aspects of Competency Covered	Result*: C/NYC

JOB #1 Procedure for Developing Specification (Spec): List the steps involved in performing the task/spec successfully. It will cover, in logical order, the critical aspects of competency listed above that will determine if the candidate is Competent or Not Yet Competent.

1.
2.
3.
4.
5.

Tools and Equipment Required for Spec completion: List all tools, equipment, and materials required in completing Job #1:

Tools	Equipment	Materials

Assessor Name:

Date:

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Job Sheet (Exemplar)

Demonstrate spot welding by fabricating wire mesh

Sample:

Job No-1: Perform Spot Welding

1. Identify project to be fabricated.
2. Prepare the required supplies, materials, tools and equipment to perform gas cuffing.
3. Set spot welding machine.
4. Perform spot welding by fabricating wire mesh
5. Check for the quality of the product through visual inspection and in accordance with the standards
6. Report to Assessor for final evaluation.
7. Clean the tools, equipment and work area.
8. Dispose waste materials and excess materials

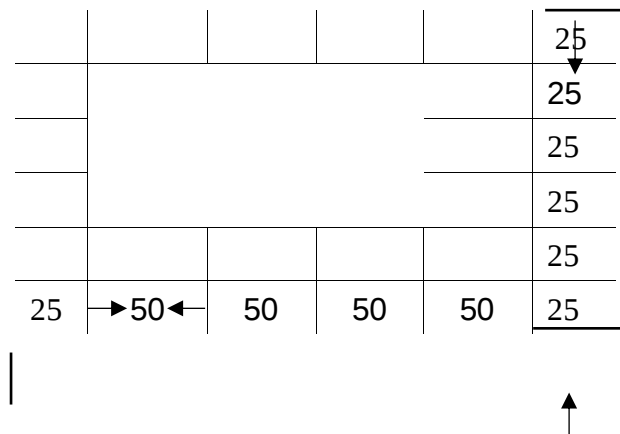
Job Specification Sheet:1 (Sample)

The illustration below is the blueprint of the project to be fabricated. In the fabrication of the project, you are to ensure the squareness and measurements of the project. This will justify the performance you have exerted to undertake this activity.

Allowable tolerances are applied.

You are given thirty (30) minutes to prepare your materials, needed tools and safety equipment and 60 (sixty) minutes to perform the activity.

Always observe safety practices.



All dimensions in the figure are in millimeters (mm)

List of Materials, Supplies, Tools and Equipment

Qualification:	National Certificate in Welding, NTVQF, Level-1
Unit of Competency:	Perform Spot Welding

Equipment

Spot Welding Machine	1 unit
Hand Shearing Machine	1 unit
Portable Angle Grinder	1 unit
Working Table	1 unit

Tools

Chipping Hammer	1 no.
Ball peen Hammer	1 no.
File (flat or half round)	1 no.
Locking C-clamp	1 no.
Flat Tongs	1 no.
Try Square	1 no.
Vernier Caliper	1 no.
Pull Push Rule	1 no.
Wire Brush	1 no.

Materials

MS Rod, 3.0mm Φ x 250mm	8 nos.
MS Rod, 3.0mm Φ x 400mm	4 nos.

Safety Paraphernalia

Welding Gloves	1 Pair
Hand Gloves	1 Pair
Leather Jacket/coverall	Unit
Safety shoes (Leather)	1 pair
Dust mask	1 no.
Safety Helmet	1 no.
Safety Goggles	1 Pair

Oral Questioning Checklist for Spot Welding with suggested answers (Sample)		Satisfactory Response	
1. What is the principle and application of spot-welding process? Answer: Spot welding is one form of resistance welding where two or more metal sheets are welded together without any filler material by applying pressure and heat to the area to be welded.		Yes	No
2. What are the parameters to produce quality weld using spot welding process? Answers: Electrode force Diameter of the electrode contact surface Squeeze time Weld time Hold time Weld Current		☐	☐
3. What will happen to the material when the carbon content increases? Answer: Increasing the carbon content in steel alloys causes the material to become harder. This is because the carbon sits in the interstitial sites of the lattice structure and hinders the movement of dislocation lines. This also increases the strength of the material but it decreases the ductility.		☐	☐
4. What is the principle and application of spot-welding process? Answer: Spot welding is one form of resistance welding where two or more metal sheets are welded together without any filler material by applying pressure and heat to the area to be welded.		☐	☐
5. How will you prevent or minimise the occurrence of spatters during spot welding and eventually cause the electrodes to stick to the metal sheets? Answers: Observe correct electrode force required for spot welding. Normally an adequate value for the electrode force is 90 Newton per square millimeter and observe the current squeeze time.		☐	☐
Feedback to the candidate' overall Performance was: ☐ Satisfactory ☐ Not Satisfactory			
Candidate's Signature:		Date:	
Assessor' Signature:		Date:	

Competency Assessment Results Summary (CARS)

Name of Candidate:			
Name of Assessor:			
Title of Qualification/ Cluster of Units of Competency	Shield Metal Arc Welding, NTVQF-1		
	Insert Name of the units of competency selected for this qualification		
Assessment Centre (RTO):		Date of Assessment:	
The performance of the candidate in the following unit(s) of competency and corresponding assessment methods			
Assessment Event		Satisfactory	Not Satisfactory
Event-1: Written			
Event-2: Demonstration			
Job-1:			
Event-3: Oral			
Note: Satisfactory Performance shall only be given to candidate who demonstrated successfully all the competencies identified in the above-named Qualification/Cluster of Units of Competency.			
Recommendation	☐ For issuance of NC/SoA (Indicate title/s of SoA, if Full Qualification is not met)	☐ For submission of Additional documents Specify:	☐ For re-assessment (pls. specify)
Did the candidate overall performance meet the required evidences/ standards?		☐ Yes	☐ No
OVERALL EVALUATION		☐ Competent	☐ Not Yet Competent
General Comments [Strengths/Improvements needed]			
Signature of Candidate		Date:	
Signature of Assessor		Date:	
Signature of Assessment Centre Manager		Date:	

CANDIDATE'S COPY (Please present this form when you claim your NC/SoA)			
COMPETENCY ASSESSMENT RESULTS SUMMARY (CARS)			
Qualification:	SMAW, NTVQF Level- 1		
Name of candidate:		Date of Issue:	
Name of Assessment Centre:		Date of Assessment:	
Assessment Results:	☐ COMPETENT	☐ NOT YET COMPETENT	
Recommendation:	☐ For issuance of NC/SoA (Indicate title/s of SoA, if Full Qualification is not met)	☐ For submission of Additional documents Specify	☐ For re-assessment (pls. specify)
Name:	Assessed by	Attested by	
Signature:			
Date:			

Different ways of presenting questions

1) Closed questions

It requires a specific response such as the name of an item, a yes/no answer, a date or title.

Closed questions are used to find out if the candidate has specific factual information that is required in the unit(s) of competency. They are used in situations where only one answer is correct. When used on their own, closed questions have limited application as they do not easily provide information on all the dimensions of competency or the application of underpinning knowledge. Closed questions need to be asked in conjunction with open-ended questions to obtain sufficient information for the assessor to determine the trainee's/candidate's competence.

2) Open-ended questions

Open-ended questions are used when a more detailed response from the candidate is required. They often involve problem solving, interpretation and application of knowledge and skill to new situation. Open-ended question can be used to:

- Extend on what has been observed in similar but different situations or in using other equipment or procedures;
- Probe the trainee's/candidate's underpinning knowledge and understanding-that is, the what, when, where, why and how of what the candidate is doing;
- Explore contingency situations such as emergencies, breakdown and unusual situations that are not likely to occur during the period of observation.
- Check on critical safety knowledge and understanding needed for the activity.
- Check how the trainee/candidate would respond in situations that occur rarely such as an emergency, breakdown or unusual weather conditions.
- Probe knowledge and understanding of relevant regulations and procedures.

Tips in preparing Oral Questioning

Oral questions should be based on the underpinning knowledge identified in the evidence guide.

Some hints on questioning:

- Make the questions formal and structured – this ensures reliability when assessing more than one candidate.
- Show the questions to the candidates (or provide general information about the nature of the questions) to help their understanding of the question.
- Be flexible with candidates who have the understanding but inadequate language skills to express themselves.
- Use “open” questions, rather than seeking a simple yes/no.
- Record the answers.
- Make up a list of acceptable responses to all questions to ensure reliability of assessment.

4. Portfolio Assessment Checklist

It contains individual pieces of evidence demonstrating work outputs that have been acquired by the candidate. The items are usually produced over a period of time and come from different sources.

When using portfolio as part of the evidence on which the assessment judgment will be based, assessor must ensure to provide clear information to candidate, like the purpose and expected composition of the portfolio.

List of suggested portfolio materials:

Forms of Evidence	Application
Self-assessment schedule	Allows the trainee/candidate to rate own performance against the requirements of the relevant unit(s) of competency.
Official transcripts, qualifications, Statements of Attainment, Certificates	Provides evidence of prior education or training completed on or off-the-job.
Assessment feedback or completed checklists	Provides evidence of on-the-job performance, observers' comments and future actions as a result of assessment
Job descriptions	Provides evidence of prior work experience.
Work Journals	Provides evidence of the candidate's ability to do part or whole of work tasks or processes.
Work samples, for example reports, letters, designs	Provides evidence of the trainee's/candidate's ability to do part or whole of work tasks or processes.
Finished products, for example tools completed	Provides evidence of trainee's/candidate's ability to produce a product or service.
Outcomes from learning programmes	It includes self-learning and on-line learning
Product descriptions or specifications	Provides evidence that the trainee/candidate is aware of the inputs, outputs or standards required to produce a product or provide a service.
Statutory declarations	Provides evidence that work samples are the trainee's/candidate's own work

Guidelines in Formulating Performance Assessment Tool

This is the practical portion of the competency evaluation instrument. This part measures the skill possessed by the trainee/candidate in relation to the occupation. It consists of General and Specific Instructions, the List of Materials, Equipment/Tools and the Marking Sheets.

1) General Instructions

This refers to the overall conduct of the test (before, during and after) which concerns both the trainer/assessor and the examinee/trainee. This part of the competency assessment specifies the do and don'ts inside the testing area.

2) Specific Instructions

This provides the instructions which the examinee must follow in the performance of the test. Note: In the standard format, the general instructions preceded the specific instructions.

The format of specific instructions includes:

- Performance or what must be done
- The conditions or what is given
- The standard of performance expected of the examinee

Provide the trainee/candidate or the trainer/facilitator instruction regarding the tool that will serve as their reference in evaluating the output, the *Performance Criteria Checklist (for institutional evaluation)* or *Rating Sheet (for national assessment)*. These tools contain criteria on how a specific task should be done in accordance with the set standard.

Each performance assessment tool (demonstration, observation, portfolio, simulation) has a corresponding performance criteria checklist, which will be used in assessing the competence of an individual to perform the task.

The Performance Criteria Checklist or Rating Sheet should follow the following:

- Work quality/ workmanship the criteria to be judged are the quality and/or the quantity of work/task performed following the set of standards such as surface finish, tolerance, clearance and others.
- Speed. The time allowed for a task/operation to be finished.
- Proper Use of Tools/Equipment & Materials The standard tools/equipment needed in the performance of the task/operation;
- Safety The extent to which the examinee followed standard safety precautions during the exam; and
- Critical Criteria The performance criteria that significantly determines competence.

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Guide for developing complex Checklist:

- 1) The checklist should be designed to collect key information on:
 - The candidate
 - The assessor
 - The assessment context
 - The relevant unit(s) of competency
- 2) The checklist should incorporate clear instructions for the trainee/candidate on:
 - The nature of the task to be performed
 - Required materials and equipment
- 3) The checklist should identify the performance to be observed based on the elements and performance criteria.
- 4) During the demonstration the trainer/assessor should:
 - Ensure candidate has all the conditions and resources needed.
 - Record observation immediately.
 - Leave decision making until after observations are complete
 - Make the demonstration as realistic as possible.
 - Give the trainee/candidates an opportunity to practice the task prior to assessment.

3) List of Materials, Equipment

This provides the listing of the materials, equipment/tools needed in the performance of the skills test. This contains also the complete specifications of each item in the listing.

Pointers to follow in the construction/formulation of a good Test of Skills:

1. The test coverage must be consistent with the job description and skills requirements;
2. The test must not take more than 8 hours to complete;
3. The test statement must specify the exact time within which the examinee is expected to finish the task and the tools/equipment that will be issued by the examinee;
4. The work performance/specimen or whatever is being tested must be observable and measurable;
5. The test should be feasible. Do not design tests which make use of rare or too expensive equipment;
6. Where applicable, there must be a working drawing which is clear and accurate;
7. The standard performance outcome if possible, should be stated such as surface finish, clearance or tolerance and number of allowable errors;
8. Directions must be clear, simple, concise and accurate;
9. Conduct trial test before the actual test administration; and
10. Consult other trade experts for advice on improving the test.

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Task Sheet 11.3-3

Task Sheet 11.3-3
Title: Develop Performance Assessment Tool
Performance Objective: Given the assigned area or competency, the trainee must be able to prepare demonstration checklist
Supplies/Materials: Competency Standard, Competency Based Curriculum (CBC), Related Materials or references, CBLM
Equipment: PC, printer with ink
Steps/Procedure: 1. Identify the evidence requirements with the same tick mark under methods of assessment; 2. Collate all evidence requirements classified as demonstration/observation 3. Transfer collated evidence requirements to appropriate forms 4. Ensure that all evidence requirements are reflected in the template; and 5. Present the output to the facilitator

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Performance Criteria Checklist 11.3-3

1	Criteria	Yes	No
2	Identify the evidence requirements/performance criteria with the same tick mark under methods of assessment?		
3	Collate all evidence requirements classified as demonstration/observation?		
4	Transfer collated evidence requirements to appropriate form in past tense form?		

Information Sheet 11.3-4

Characteristics of Assessment Tool

Learning Objective:

After reading this Information Sheet, you must be able to determine characteristics of assessment tool.

To ensure the quality of the developed assessment tool, the developer must consider the following criteria during the preparation of the instrument.

1. Reliability

This refers to consistency of scores by the same person when re-examined with the same test on different occasion.

Possible Reasons for Inconsistencies of Scores:

- a) *Scores inconsistency*. Scoring should be objective by providing a scoring key so that corrector's biases do not affect the examinee's scores.
- b) *Limited sampling of behavior*. This happens with too much accidental inclusion of certain items and the inclusion of others. Careful planning is important.
- c) *Instability of the examinee's performance*. Fatigue, practice, and examinee's mood are among the factors that may affect performance of the examinees' in any given test.

Factors that may affect Reliability

- a) *Length of the test* – the longer the test the higher the reliability.
- b) *Difficulty of the test* – the bigger the spread of the scores the more reliable the measured difference is likely to be. Items should not be too easy or too difficult.
- c) *Objectivity* – this is achieved if scores are independent of the subjective judgment of individual examinees.

2. Validity

This is the degree to which the test actually measures what it intends to measure. It provides a direct check on how well the test fulfils its functions.

Factors that influence the validity of test:

- a) Appropriateness of test items;
- b) Directions;

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- c) Reading vocabulary and sentence structures
- d) Difficulty of items;
- e) Construction of test items – no ambiguous items or leading items;
- f) Length of the test – sufficient length;
- g) Arrangement of items – from easy to difficult; and
- h) Patterns of answers – no patterns

3. Fairness

It means that an assessment should "allow for trainees of both genders and all backgrounds to do equally well. Every candidate must have equal opportunity to demonstrate the skills and knowledge being assessment assessed?"

The fairness of the assessment is jeopardized if bias exists either in the task or in the rater/assessor.

For a task to be fair, its content, context, and performance expectations should:

- reflect knowledge, values, and experiences that are equally familiar and appropriate to all;
- tap knowledge and skills that all have had adequate time to acquire; be as free as possible of cultural, ethnic, and
- Gender stereotypes.

4. Safety

The assessment tool must demonstrate the safety precautions and the occupation and health safety measure. The designed tasks specifically on the performance test must take into consideration factors that could affect safety of the candidates.

5. Cost Effectiveness

This is the comparison of the relative of the cost and the outcomes. The identified materials and tools to be utilized in the assessment should be reasonable and will form part in the accomplishment of the assessment.

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Self-Check 11.3-4

Direction: Read the questions carefully. Choose the correct response for each item by writing the letter which represents the best answer on separate sheet provided. Please use capital letters.

- _____ 1. It affects the reliability of the test in terms of the number of items of the instrument contains:
- A. Difficulty of the test
 - B. Length of the test
 - C. Measurement of the test
 - D. Objectivity of the test
- _____ 2. It determines the relationship of the expenditures and the result of the assessment
- A. Cost Effectiveness
 - B. Fairness
 - C. Reliability
 - D. Validity
- _____ 3. It indicates whether the evaluation instrument has determined what is supposed to be measured.
- A. Cost Effectiveness
 - B. Fairness
 - C. Reliability
 - D. Validity
- _____ 4. Fairness of an assessment tools will be put into risk if bias will exist.
- A. Cost Effectiveness
 - B. Fairness
 - C. Reliability
 - D. Validity
- _____ 5. It measures the effectiveness of the assessment tools to all type of gender and culture
- A. Discrimination
 - B. Evaluation
 - C. Fairness
 - D. Validity

Answer Key 11.3-4

Sl. No.	Answer Key 11.3-4
1.	B
2.	A
3.	D
4.	B
5.	C

LEARNING OUTCOME 4: VALIDATE ASSESSMENT TOOLS

ASSESSMENT CRITERIA:

1. Draft assessment tools are checked against evaluation criteria and amended, when necessary.
2. Assessment tools are pilot tested with a small sample of assessors and industry practitioner.
3. Information gathered through the validation are analyzed to establish any changes that maybe required.
4. Assessment tools are finalized incorporating suggested changes as appropriate.

CONTENTS:

- Evaluation criteria
- Pilot testing
- Assessment tool validation
- Item analysis

CONDITIONS:

Trainees must be provided with the following:

- Handouts or reference materials/books on the above stated contents
- PCs/printers or laptops with internet access
- LCD/Digital Projector and Screen
- Microphones
- Bond paper
- Ball pens/pencils and other office supplies and materials
- Communication resources
- Workplace or simulated environment

METHODOLOGIES:

- Lecture/discussion
- Demonstration/application
- Presentation

ASSESSMENT METHODS:

- Written test
- Demonstration
- Oral Questioning
- Observation with checklist
- Portfolio.

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Learning Experiences 11.4-1

Learning Outcome 4

VALIDATE ASSESSMENT TOOLS

Learning Activities	Resources/Special Instructions
Determining the evaluation criteria	• Read Information sheet 11.4-1. Evaluation Criteria. • Answer Self-check 11.4-1 • Check your answer with the Answer Key 5.4-1.
Pilot Testing of the assessment tool	• Read Information sheet 11.4-2. Pilot Testing • Answer Self-check 11.4-2 • Refer to the answer key to check for your answer.
Validating the assessment tool	• Read Information Sheet 11.4-3. Assessment Tool Validation • Answer Self-check 11.4-3 • Refer to the answer key to check for your answer

Information Sheet 11.4-1

Evaluation Criteria

Learning Objectives:

After reading this Information Sheet, you must be able to determine evaluation criteria for assessment tools.

In the previous information sheets, there are several items cited as significant in the development of the assessment tool. To ensure that all the items are covered, the developer has to evaluate the developed tool against the set criteria.

Evaluation

Evaluation is the process of analyzing, reflecting upon, and summarizing assessment information and making judgments and/or decisions based on the information collected about candidate achievement in relation to outcomes.

Evaluation of Criteria

The developed assessment tool must be checked and evaluated based on the set criteria to ensure the quality of the tool as follows:

- 1) Effectiveness and relevance to the competency standards
- 2) Whether the assessment tool meets the principles of assessment
- 3) Whether the assessment tool meets the rules of evidence
- 4) Whether the assessment tool is appropriate to selected method
- 5) Whether the assessment tool is appropriate to the target assessment method
- 6) Whether the assessment tool provides guidance on reasonable adjustment
- 7) Whether the assessment tool enables the candidate to demonstrate current competency
- 8) Level of engagement and direct participation of candidate
- 9) Appropriateness of language and literary used for intended audience

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Self-Check 11.4-1

Direction: Enumerate 9 Evaluation Criteria for Assessment Tools

Answer Key 11.4-1

1. Effectiveness and relevance to the competency standards
2. Whether the assessment tool meets the principles of assessment
3. Whether the assessment tool meets the rules of evidence
4. Whether the assessment tool is appropriate to selected method
5. Whether the assessment tool is appropriate to the target assessment method
6. Whether the assessment tool provides guidance on reasonable adjustment
7. Whether the assessment tool enables the trainee-candidate to demonstrate current competency
8. Level of engagement and direct participation of trainee-candidate
9. Appropriateness of language and literary used for intended audience

Information Sheet 11.4-2

Pilot Testing

Learning Objective:

After reading this Information Sheet, you must be able to identify pilot testing and its significance in developing competency assessment tool.

As discussed in the previous information sheet, validation of the developed test items is important in ensuring the validity and reliability of the test questions. One of the most effective ways of validating the test items is through conducts of pilot testing.

Pilot Test

Pilot testing is an important step in the development of a test. It ensures that the material work or usable before widespread implementation. Pilot testing to validate an assessment consists of identifying individuals within an occupation that are at approximately the target level of the test. For example, a technician level test may require selecting individuals who have some level of experience within the occupation to pilot the test. Pilot participants are selected by knowledgeable people within the occupation. They are asked to select participants who they feel are at the specific level the test is designed.



Through this selection process come aspect of “Criterion Related Validity” is generated. Typically, selected participants have already been evaluated to some degree by the person who selects them. Therefore, some degree of relationship exists between the level of the participants and the level of the test. Other criterion related tests results may be used to validate this process for a pilot group. The size of the pilot test group will be selected to generate sufficient data.

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Depending on the number of people within the *occupation*, the number within a *location*, or the number of individuals that can be found *to volunteer*, determines the pilot test group. “Face Validity” is generated at this point in the test development process. Face Validity refers to the recognition of the *test title*, *test categories*, and *test items* as being part of the field of occupation. Individuals who pilot test are asked to respond or comment on each of these parts of the test.

The pilot test also asks participants to mark items, words or phrases that might have an impact on protected groups in a second attempt to eliminate bias.

Key reasons to pilot test

1. Questions able to be administered in a ‘real world environment’ by interviewers or self-reported, depending on method used, and can then assess:
 - Respondent understanding of question meaning
 - Appropriateness of response categories
 - Question clarity
2. Correct sequencing of respondents if needed
3. Adequacy of training procedures
4. Adequacy of instructions
5. Effectiveness of data capture
6. Processing instructions and procedures

Desired results of pilot testing

- Need for change identified in question design, wording or instructions
- Effectiveness of operational procedures tested
- Do the questions asked do what was intended, and are they likely to provide the output data required?

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Guidelines to Conduct Validation for Written test

1. Preparatory Activities

Facilitator/s:

1. Evaluate and review the developed test items;
2. Consolidate, package and reproduce the developed Institutional Evaluation Tools;
3. Assigns facilitator/test administrator for the programme;
4. Identifies, prepares relevant communications and coordinates with contact person/s in concerned offices and institutions who shall be involved in the conduct of the validation. The identified institution must be offering courses/programmes relevant on the Institutional Evaluation Tools to be validated;
5. Orients the selected validating institution on the objectives, type of respondents and procedures in the conduct of validation. Respondents must have completed the unit of competency/qualification to be validated;
6. Prepares and reproduces appropriate number of copies of the following documents:
 - a. Respondent's Profile Form;
 - b. Attendance Sheet
7. Assigns and labels control number in every institutional evaluation package to be distributed in order to ensure complete retrieval of institutional evaluation tools packages from respondents;
8. Ensures the availability of the venue including the following amenities:
 - a. room layout/set-up;
 - b. ventilation;
 - c. lighting;
 - d. chairs and table/s
 - e. AV equipment (microphone/LCD projector)
9. Makes available the institutional evaluation tools packages to the designated venue on the scheduled validation date; and
10. Immediately coordinates/informs involved/partner institution on any changes made with regards to the conduct of validation activity.

Selected Validating Institution/Partner:

1. Provides Memorandum/letter of acceptance for the conduct of validation;
2. Designates focal/contact person for the activity;
3. Identifies the appropriate respondents;
4. Provides the appropriate venue with the necessary amenities; and

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5. Immediately coordinates/informs the concerned office on any changes made with regards to the conduct of validation activity.

2. Actual Validation Activity

Facilitator/s:

1. Turns up at the venue on scheduled date and immediately coordinates with Institution's focal person upon arrival;
2. Orients respondents on the objectives and procedures of the validation;
3. Disseminates Respondents Profile forms to trainees/students and directs them to fill-out the form before the conduct of written examination;
4. Facilitate the administration of the written examination:
 - Familiarizes respondents on the contents and coverage of the test package;
 - Distributes test materials to respondents;
 - Keeps track of examination time (start and finish) by indicating it on the submitted answer sheet of every respondent;
 - Ensures complete retrieval of all the distributed test packages and other examination paraphernalia;
5. Facilitates safekeeping/return of the test packages/examination paraphernalia to the concern office; and
6. Thanks and acknowledges the respondents and the institutions and informs them of the succeeding activity of the validation process.

Selected Validating Institution/Partner:

- 1. Ensures the respondents are already in the testing venue;
- 2. Informs briefly the respondents of what the activity is all about; and
- 3. Turns-over to administering office the facilitation of the written test administration.

3. Post Validation Activity

Facilitator/s:

1. Checks the answer sheets;
2. Consolidates test items and prepare test item analysis;
3. Prepares test item analysis report/recommendation and submit to the authority;
4. Prepares documentation for the validation activity;
5. Prepares acknowledgement letter/updates to partner institution; and
6. Re-packages the reliable and test items based on the result of the item analysis and the recommendations.

Self-Check 11.4-2

Direction: Read the statement carefully. Write **True** if the statement regarding guidelines on conduct of validation for written test is correct and **False** if the statement is incorrect. Write your answer on the separate sheet provided.

- _____ 1. During the preparation stage, the facilitator consolidates, package and reproduce the developed institutional evaluation tools.
- _____ 2. The facilitator identifies the appropriate respondents.
- _____ 3. The validating institution informs briefly the respondents of what the activity is all about.
- _____ 4. On post validation activity, the facilitator turns-over to administering office the facilitation of the written test administration.
- _____ 5. After the, facilitator consolidates test items and prepare test item analysis

Answer Key 11.4-2

Sl. No.	Answer Key 11.1-1
1.	True
2.	False
3.	True
4.	False
5.	True

Information Sheet 11.4-3

Assessment Tool Validation

Learning Objectives:

After reading this Information Sheet, you must be able to determine and enumerate the criteria used in evaluating an assessment tool.

The final phase in the Development of Assessment Tool is the Assessment Validation, which involves comparing, evaluating and reviewing the assessment processes, methods and tools, and the subsequent assessment decisions.

This procedure ensures that the assessment processes, methods, tools and decisions are valid and reliable.

Validation of Assessment Tools

Validation of assessment tools is a process where the developer compares and evaluates the use and effectiveness of the assessment methods, procedures and decisions. This can be applied to a wide range of assessment.

Purpose of Validation

An assessment validation provides a developer an opportunity to:

- Demonstrate compliance with the required evidences
- Determine whether assessment decisions reflect the rules of evidence
- Evaluate the quality of assessment tools
- Improve assessment practices
- Provide professional development for assessors
- Increase self-confidence

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Steps in Validating Assessment Tool

Steps	Actions/Checklist
1) Select appropriate validation strategy/yes to review and compare assessment strategies (processes, methods, tools)	1) Validation aims to promote consistency in assessment judgements and in terms of developing a common understanding of : • The unit(s) of competency • The standard of performance required • Evidence requirements • Allowable adjustments 2) The basis on which assessment are made. 3) Validation may be internal or external. 4) Assessment Validation may take the form of: • Co-assessment • Peer-review • Benchmarking with other private providers • Verification of assessment judgements • Consensus moderation
2) Plan Validation using “Assessment Validation Action Plan”	Careful consideration needs to be given to the following: • Sample • Timing • Purpose of validation
3) Record and file assessment validation process and action taken to improve quality and consistency of assessment using Validation Pro-forma Form	The validation process, the outcomes and action taken to improve quality and consistency of assessment must be documented using Validation Pro-forma Form.

Sample Forms used in Validation

- 1) **Assessment Validation Action Plan.** This is used to plan assessment validation activities for all qualifications or unit of competency on scope of registration. Trainers/assessors need to participate in validation activities.

Qualification (Name and code)			
Plan for period:			
Unit of competence	Activity	Date	Follow up & Timeline
Signed:		Date:	

- 2) **Assessment Validation Participation Record.** Each participant shall receive a copy of the record.

Qualification (Name and code)		
Date:		
Name of participants	Area of expertise	Employer/delivery site
Follow up action required	Who is responsible	Timeline

- 3) **Assessment Validation Checklists.** This checklist may be used as part of an assessment validation meeting to evaluate assessment evidence provided to meet particular performance criteria.

To validate an assessment task or tool (or an assessment plan), complete Part A, B & C		
Validation Panel (Names)		
Unit(s) of competency Code/s and Name/s:		
Elements assessed with this assessment task		
Brief description of evidence to be provided to meet performance criteria:		
PART A: Principles of Assessment	Yes/No	Comment/s
Valid		
Covers all performance criteria		
Covers required skills and knowledge		
Covers all critical aspects of assessment		
Covers OH&S requirements		
Reliable		
Range of statement is correctly interpreted		
Resource requirements are met		
Fair		
Does not measure more than what is required		
Allows demonstration of competence at appropriate level		
Flexible		
Adaptable for diverse groups: disability/cultural diversity		
Allows flexibility in delivery and assessment strategies		
General comments about the assessment tool (or assessment plan)		
General comments about the assessment tool (or assessment plan)		
PART B: Rules of Evidence	Yes/No	Comments
Valid		
Is the evidence provided relevant to what is being assessed?		
Sufficient		
Is the evidence provided sufficient for a judgment of competence?		
What additional evidence is required?		
Current		
Does the evidence show that the candidate can currently meet the criteria?		

Authentic		
Can you verify the evidence provided is the work of the candidate?		
General comments about the evidence presented:		
PART C: Feedbacks and Recommendations		
Opportunities to improve:		

4) **Assessment Validation Outcome.** The form is completed by supervisor or coordinator to record any action required for continuous improvement. Copies of the form are forwarded to persons designated to act on recommendations.

Outcome & action required for continuous improvement	Action/s	Who & When
Interpretation of competency		
Requirements of assessment Clarity of performance criteria Key aspects of evidence Key competencies integration		
Assessment Tool		
Candidate information Assessor information Evidence collection Recording and reporting Candidate feedback		
Assessment process		
Timely Informative Fair/Flexible OH&S compliant		
Assessment judgement		
Reflects requirement of unit of competency		
Reflects industry standards consistency		
Name: Position: Signed: Date:		

Self-Check 11.4-3

Direction: Arrange the steps in validating assessment tool in chronological order by indicating the number that correspond each statement on the separate sheet provided.

- _____ A. Select appropriate validation strategy to review and compare assessment strategies
- _____ B. Record and file assessment validation process and action taken to improve quality and consistency of assessment using validation Pro-Form
- _____ C. Plan Validation using the assessment validation action plan

Answer Key 11.4-3

Sl. No.	Answer Key 11.4-3
A	1
B	3
C	2.

Review of Competency

Below is your performance criteria checklist for the module of Developing Competency Based Assessment Tools

Performance Criteria	YES	NO
1.1 Required consumable items and equipment's are arranged		
1.2 Competency standards and curriculum are identified		
1.3 Relevant unit(s) of competency are read and interpreted		
1.4 Required evidence are identified covering all unit of competency		
1.5 Evidence matrix are prepared to identify the method of assessment		
2.1 Suitable assessment methods are identified that are consistent with the evidence requirements		
2.2 Types of assessment questions are decided considering the qualification levels to be assessed		
2.3 Evidence guide and relevant assessment guidelines are accessed and used		
2.4 Assessment methods are selected which are appropriate for the competency being assessed and in line with the purpose and assessment context		
3.1 Standard format of the assessment tools is followed		
3.2 Units of competency are considered and incorporated during the tools development		
3.3 Assessment tools are prepared in accordance with the advice provided in the relevant assessment guidelines		
3.4 Clear and concise written instructions and materials are prepared for the assessor and the candidate which accurately describe the assessment activity.		
3.5 Assessment tools are checked considering principles of competency-based assessment.		
3.6 Safety and security of the tools are ensured by the developers maintaining moral and ethical point of views.		
4.1 Draft assessment tools are checked against evaluation criteria and amended		
4.2 Assessment tools are pilot tested with a small sample of assessors and industry practitioners.		
4.3 Information gathered through the validation are analyzed to establish any changes that may be required.		
4.4 Assessment tools are finalized incorporating suggested changes.		

I now feel ready to undertake my formal competency assessment

Signature of trainee:

(Name:)

Date:

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References:

1. ILO, (2012). Design Competency Based Assessment
2. Department of Education and Training, (2002). Guidelines for Competency Based Assessment in the vocational education and training sector: Western Australia
3. Ms. K.V Aguilar et.al, (2010). Planning Training Session
4. Department of Education and Training, (1999). Everyone's Guide to Designing Assessment Activities: New South Wales, Australia.
5. Aguilar, Katherine Amor. Develop Competency Assessment Tools
6. Bangladesh Technical Education Board, (2012). Competency Assessment Tool: Dhaka, Bangladesh
7. TESDA-CACO (2012). Enhancement Training on Assessment Methodology
8. Center on Education and Training for Employment, (2006). Assessment Student Performance, Ohio State University
9. Management of Competency Based Training and Education, Dr. B. L. Gupta
10. Methods of Assessment. Retrieved July 25, 2012 from <http://www.ncrel.org/sdrs/areas/issues/methods/assment/as5relia.htm>
11. Vocational Directorate, (2014). Developing Competency Based Assessment Tools, Baghdad, Iraq.
12. ILO, (2014), Implementation Manual: National Technical and Vocational Qualification Framework NTVQF). ILO Country Office for Bangladesh.

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