IUT’s Advice and Proposal on some Key Reforms Issues concerning Technical and Vocational Education & Training for OIC Member Countries
Presented By
Prof. Dr. Che Kum Clement

- Professor and Head of Department of Technical and Vocational Education (TVE)
  Islamic University of Technology (IUT)
  Organisation of Islamic Cooperation (OIC)
  Dhaka, Bangladesh

- IUT Lead Team Consultant (Component 3)
  ILO Project on Leadership and Management Development Program for Bangladesh TVET Managers & TVET Teacher Training
Objectives of the Proposal

- Advice and Orient OIC Member Countries on the Importance of TVET Reform Initiatives
- Present the Proposal of National Technical and Vocational Qualification Framework (NTVQF)
- Explain the Procedures of the Implementation of NTVQF
Outline of the Proposal Presentation

- **Background**
- **Quality Assurance for a Country’s TVET System**
- **Features of the Quality Assurance of a Country’s TVET**
  - Competency Standards
  - NTVQF and how it works
  - Skills Quality Assurance System
- **Components of Skills Quality Assurance System**
  - Overview on the Process of Registration and Accreditation of Registered Training Institutions/Organization
  - Overview on the Training, Assessment and Certification of Trainers
  - Overview on the Competency-Based Training and Assessment System
- **Issues and Concerns**
CAUSES

- Not relevant HRD programs
- Inadequate intervention due to the absence of borderless and seamless VE&T
- Inadequate investments on VE&T
- Low quality learning outputs
- Mismatch of skills with job requirements
- Inadequate market intelligence
Structural Unemployment
TVET Reform Project Proposal Initiatives: Let’s take an Example of Cameroon TVET System

- Develop/Improvement and Approval of the National Skills Development Policy (NSDP)
- Creation of Cameroon Board for Technical and Vocational Education and Training (CBTVET)
- Creation of a National Skills Development Council
- Establishment of National Technical and Vocational Qualification Framework (NTVQF)
- Development of Competency Standards
- Implementation of Skills Quality Assurance System
- Implementation of Competency Based Training and Assessment (CBT&A)
An Example of TVET Reform Project Proposal for CAMEROON TECHNICAL and VOCATIONAL EDUCATION & TRAINING SYSTEM

Cameroon National Skills Development Policy

Consultation With Stakeholders
Analysis of Labor Market Information

Formulation of the National TVET Plan

Development of Learning Packages
Development of Competency Standards
Development of Assessment Standards

Trainers and Assessors Training, Assessment and Qualification

Accreditation of Qualification Programs
Registration of Training Org

Qualification and Certification
Award of National Certificates

Assessment of Competence

CBT Delivery

Recognition of Prior Learning/Equivalency/Lifelong Learning

Management of Information System

Recognition of Prior Learning/Equivalency/Lifelong Learning

Q U A L I T Y   M A N A G E M E N T   S Y S T E M
The National Technical and Vocational Qualification Framework (NTVQF) is a comprehensive, nationally consistent yet flexible framework for all qualifications in secondary/post-secondary tech/voc education and training.

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
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</table>
| Level 6 | Supervisor / Middle Level Manager  
Manage a team or teams in workplace activities where there is unpredictable change |
| Level 5 | Highly Skilled Worker  
Take overall responsibility for completion of tasks in work or study |
| Level 4 | Skilled Worker  
Take responsibility, within reason, for completion of tasks in work or study |
| Level 3 | Semi-Skilled Worker  
Work under supervision with some autonomy |
| Level 2 | Medium Skilled Worker  
Work under indirect supervision in a structured context |
| Level 1 | Basic Skilled Worker  
Work under direct supervision in a structured context |
The National Technical and Vocational Qualification Framework (NTVQF) is a comprehensive, nationally consistent yet flexible framework for all qualifications in post-secondary tech/voc education and training.

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</tr>
<tr>
<td></td>
<td>Work under supervision with some autonomy</td>
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<td>Medium Skilled Worker</td>
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<td>Basic Skilled Worker</td>
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<td>Work under direct supervision in a structured context</td>
</tr>
</tbody>
</table>
TVET Reform Documentation as may be approved by Cameroon Board for Technical and Vocational Education and Training (CBTVET) if Created

Competency Standards
- Knowledge
- Attitude
- Skills
- Industry Standards

Qualification Levels
- Level 6
- Level 5
- Level 4
- Level 3
- Level 2
- Level 1

Training Standards
Assessment Standards
Certification Standards

Course (Qualification) Accreditation Documents

Competency Standards in Different Industry sectors – Transport, Information Technology, Agro food, Tourism, etc and Qualifications may be developed and approved by (CBTVET)
What are Competency Standards?

- Descriptions of key work outcomes in an industry
- Focus on workplace activities rather than training or personal attributes.
- Developed in partnership with industry
- Are expressed as outcomes.
- Written in language that is understandable to employees, employers, supervisors and trainers.
How are standards developed?

- **Key role of industry**
  - Preparation and planning
  - Consultations and workshops
  - Validation
  - Promotion

- Participation of all industry stakeholders - large/micro employers / unions
What is the format of competency standards?

<table>
<thead>
<tr>
<th>Unit Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Descriptor</td>
</tr>
<tr>
<td>Elements</td>
</tr>
<tr>
<td>Range of Variables</td>
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<tr>
<td>Evidence Guide</td>
</tr>
<tr>
<td>Unit Code and Title</td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td><strong>Unit Descriptor</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Element of Competency</th>
<th>Performance Criteria</th>
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</thead>
<tbody>
<tr>
<td>1. Follow OSH practices</td>
<td>1.1 Personal protective equipment (PPE) used while working.</td>
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<td>1.2 OSH standards as set out by the workplace and legislative section followed while working.</td>
</tr>
<tr>
<td>2. Identify the methods of fixing and securing equipment.</td>
<td>2.1 Types and kinds of equipment to be fixed and secured are identified.</td>
</tr>
<tr>
<td>3. Select and list the tools and materials required</td>
<td>3.1 Required tools are listed as per job requirement.</td>
</tr>
<tr>
<td></td>
<td>3.2 Required materials are selected as per job requirement.</td>
</tr>
<tr>
<td>4. Perform fixing and securing the equipment.</td>
<td>4.1 Fixing and securing operation are performed according to the workplace requirements.</td>
</tr>
<tr>
<td>5. Clean and store equipment</td>
<td>5.1 Equipment is cleaned and stored.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Range of Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
</tr>
<tr>
<td>1. Equipment may include but not limited to</td>
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</table>

**Evidence Guide**

1. Critical Aspects of Evidence
2. Required Underpinning Knowledge
   - Mechanical strength of materials.
   - Chemical effects of materials.
   - Performance standard as per BSTI.
3. Required Underpinning Skills
   - Selection of fixing materials.
   - Use of fixing tools.
   - Use of spirit level.
Competency Standards Provide

- benchmarks for the training system to develop and deliver training programs relevant to workplace needs;

- benchmarks for assessment to ensure that the system is delivering what industry has asked for; and

- benchmark for Qualifications
What is a qualification?

- Recognition of achievement of a group of units of competency that meet:
  - industry requirements for useful work
  - the NTVQF descriptor for National Certificate 1, 2, 3 4, 5 or 6
QUALIFICATIONS

JOB ROLES

MATCHED WITH NTVQF

UNITS OF COMPETENCY
What are the components of a qualification?

Qualifications comprise:

- Generic units of competency
- Sector Specific units of competency
- Occupation specific units of competency
- Elective units of competency
Packaging Of Qualification
ALIGNED TO THE NTVQF LEVELS

- Level 6
- Level 5
- Level 4
- Level 3
- Level 2
- Level 1

The building blocks of qualification are the units of competency in an industry
What is the purpose of qualifications?

- Recognition of successful completion of training
- Recognition of skills acquired through informal learning and work
- National recognition of skills
- Access to employment
- Pathway to further education and training
- International recognition of skills
Components of Skill Quality Assurance System (How NTVQF will work?)

**Competency-Based Training System**
- CBT&A Certified Trainers
- Training Equipment and Tools
- Training Workshop and Facilities
- Curriculum and learning Materials
- RTO

**Competency Assessment System**
- Certified Assessors
- Assessment Facilities
- Equipment and Tools
- Assessment Tools

**National Certification System**
- Issuance of National skills Certificate
- Registry of Students/Trainees/Workers Trained, Assessed and Certified

**COMPETENCY STANDARDS**
- Knowledge
- Attitudes
- Skills
- Industry Standards

Management of NTVQF Information System
Pathways to Qualification

Clients
- Trainees
- Students
- Workers
- And others

Training

Assessment

Certification (NTVQ Certificates)
- National Certificate
- Statement of Achievement

Competency Standard
(Knowledge, Skills Attitude and Industry Standard)
Principles of Competency Based Training (CBT)
Competency-Based Training (CBT)

CBT is a training delivery approach that focuses on the competency development of the learner as a result of the training.
Competency-Based Training . . .

1. emphasizes most on what the learner can actually do;
2. focuses on outcomes rather than the learning process within specified time;
3. is concerned with the attainment and application of knowledge, skills and attitude to a specific level of competency.
Why the Competency-Based Approach?

Vocational Education and training must keep pace with technology and customer requirements.
The Vocational Education and Training System should begin and end with the customers needs.

Commerce, Industry and Government

Communicates need priorities

Responds w/ system & courses to meet industry needs

Technical and Professional Education and Training
How are these needs identified and coordinated?

Usually through a job analysis process with the development of competency standards at …

the industry-wide level or organizational level
10 Principles of CBT
Principle One

The training is based on curriculum developed from the competency standards

Learning is based on the Competency-based curriculum
Principle Two

Learning is competency-based or modular in structure
Principle Three

Training delivery is individualized and self-paced

Learning is done by the learner at own pace
Principle Four

Training is based on work that must be performed

Learning is based on the actual industry practice
Principle Five

Training materials are directly related to the competency standards and the curriculum

CS to CAD to LMs
Principle Six

Assessment of learners is based in the collection of evidences of work performance based on industry or organizational required standards.

**Traditional**

Students are judged against each other (norm referenced Assessment)

**CBTVET**

Each student is assessed against the evidences based on required standard

*Students are not judged against each other*
Principle Seven

Training is based both on and off the job components

Better learning with industry and school partnership
Principle Eight

The system allows Recognition of Prior Learning (RPL)

Workers and Students can have prior skills recognized
Principle Nine

The system allows for learners to enter and exit programs at different times and levels and to receive an award for competencies attained at any point.
Principle Ten

Approved training programs are nationally accredited

Training programs will be registered within CBTVET
Comparative Analysis between Traditional and CBT
## Traditional

- Instructors focus on managing instruction.
- Most students enter at about the same time.
- Students all cover the same material.
- Students all proceed from one topic to the next at the same time.
- The instructor controls the learning pace.
- All students are usually tested at once.

## Competency Based

- Trainers focus on managing learning.
- Trainees enter at various times throughout the year.
- Different trainees maybe trained for different unit of competency within the same program.
- Each trainee moves on the next task only after mastering the task he or she is currently working on.
- Each trainee progresses at his or her own pace.
- Each trainee is tested when ready to demonstrate mastery.
<table>
<thead>
<tr>
<th>TRADITIONAL</th>
<th>COMPETENCY BASED</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ VERY LITTLE CONTINUOUS FEEDBACK IS GIVEN</td>
<td>■ IMMEDIATE FEEDBACK IS GIVEN TO EACH TRAINEE AT CRITICAL POINTS IN THE LEARNING PROCESS</td>
</tr>
<tr>
<td>■ THE INSTRUCTOR IS INVOLVED IN TEACHING ONLY ONE TOPIC AT A TIME</td>
<td>■ THE INSTRUCTOR MUST BE ABLE TO ANSWER QUESTIONS ON MANY DIFFERENT TASKS EACH DAY</td>
</tr>
<tr>
<td>■ RETESTING IS DISCOURAGED OR NOT ALLOWED AT ALL</td>
<td>■ RETESTING IS ENCOURAGED TO REACH MASTERY</td>
</tr>
<tr>
<td>■ MATERIALS, TOOLS AND SUPPLIES FOR ONLY ONE TOPIC ARE NEEDED AT A TIME</td>
<td>■ THE TRAINER MUST SEE THAT ALL MATERIALS NEEDED FOR MANY TASKS ARE READILY AVAILABLE</td>
</tr>
<tr>
<td>■ THE NUMBER OF STUDENTS ENROLLED IS MAXIMUM CAPACITY AT THE BEGINNING OF THE YEAR AND DECLINES TO HALF OR LESS TOWARDS THE END</td>
<td>■ AS VACANCIES ARE FILLED, TRAINEES ENROLMENT REMAINS AT CAPACITY ALL YEAR LONG</td>
</tr>
<tr>
<td>TRADITIONAL</td>
<td>COMPETENCY BASED</td>
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<td>----------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>MOST INSTRUCTIONS ARE DELIVERED BY OR DEPENDENT UPON THE INSTRUCTOR</td>
<td>THE TRAINER MUST MANAGE THE USE OF A WIDE VARIETY OF INSTRUCTIONAL MEDIA AND MATERIALS EACH DAY</td>
</tr>
<tr>
<td>THE PROGRAM IS USUALLY CLOSED DOWN OR SHORTENED DURING THE HOLIDAY MONTHS</td>
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<tr>
<td>THE EVENING PROGRAM IS USUALLY SEPARATE AND DISTINCT FROM THE DAY PROGRAM</td>
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<tr>
<td>THE INSTRUCTOR CONTROLS THE SEQUENCE IN WHICH TOPICS WILL BE COVERED</td>
<td>DAY AND EVENING PROGRAMS BOTH HAVE ACCESS TO ALL LEARNING GUIDES AND RESOURCES</td>
</tr>
<tr>
<td></td>
<td>IF POSSIBLE, TRAINEE DETERMINE THE SEQUENCE OF TASKS</td>
</tr>
</tbody>
</table>
Contents of the NTVQF Implementation Manual

**COMPETENCY STANDARDS**
- Knowledge
- Attitude
- Skills
- Industry Standards

**Competency- Based Training Delivery System**
- CBT&A Certified Trainers
- Training Equipment and Tools
- Training Workshop and Facilities
- Curriculum and learning Materials

**Competency Assessment Delivery System**
- Certified Assessors
- Assessment Facilities
- Equipment and Tools
- Assessment Tools

**Competency Certification system**
- Issuance of National skills Certificate
- Registry of Students/Trainees/Workers Trained, Assessed and Certified

**Development and updating of Competency Standards**

**1) Training, Assessment and Certification of CBT&A Trainers**
**2) Development of Curricula and Learning materials**
**3) Registration and Accreditation of Vocational Education and Training Institutions (VTI)**
**4) Implement Competency Based Training (CBT)**
**5) Compliance Audit of VETI**

**1) Training, Assessment and Certification of Assessors**
**2) Development of Assessment Tools**
**3) Accreditation of Assessment Centers**
**4) Implement Competency-Based Assessment**
**5) Compliance Audit of Assessment Centers**

**Management of NTVQF Information System**
- Issuance of National Skills Certificates
- Management of Information System
Quality Assurance of Learning and Assessment Programs

- Registration
  - Management of Quality
  - Management of Resources
  - Quality and Relevance of Programs
  - Capacity of Teaching and Support staff
  - Quality of Facilities and Equipment
  - Quality of Students services and amenities

- Accreditation
  - Link with NTVQF
  - Learners
  - Delivery Strategy
  - Assessment Strategy
  - Human Resource
  - Learning and Physical Resource
  - Monitoring and Review

- Audit
Assessment and Certification under CBT&A

For a Trainer to conduct NTVQ program, he or she must have the following:

- NTVQ level certified on the qualification, and
- CBT&A level 4 certified

Certification must be issued by CBTVET
Assessor Assessment and Certification

For an Assessor to conduct assessment for NTVQ qualification, he or she must have the following:

- NTVQ level certified on the qualification, and
- Certified on the four units of competencies identified for Assessor.

Certification must be issued by CBTVET
<table>
<thead>
<tr>
<th>Competencies</th>
<th>Assessor</th>
<th>Assessment Designer</th>
<th>CBLM Developer</th>
<th>CB course Developer</th>
<th>CB Trainer</th>
</tr>
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<tbody>
<tr>
<td><strong>Certificate level 5</strong></td>
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<tr>
<td>1. Conduct Training Need Analysis</td>
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<tr>
<td>2. Design and Develop Competency-based Learning Programs</td>
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<td>3. Validate Competency-based Assessment</td>
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<td>4. Coordinate training/assessment for apprenticeship</td>
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<td>5. Evaluate competency-based training and assessment</td>
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<td>6. Facilitate training of TVET trainers and assessors</td>
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<td><strong>Certificate level 4</strong></td>
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<td>1. Work effectively within Cameroon TVET sector</td>
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<td>2. Promote inclusive learning in CBT&amp;A</td>
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<td>3. Apply OSH in CBTA environment</td>
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<td>4. Use information technology to support learning</td>
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<tr>
<td>5. Maintain and enhance professional practice</td>
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<td>6. Maintain training equipment and facilities</td>
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<td>7. Maintain and enhance technical competence</td>
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<td>8. Design and modify CBLM</td>
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<td>9. Plan and organize Competency-Based training sessions</td>
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<tr>
<td>10. Deliver Competency-Based training</td>
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<tr>
<td>11. Design competency-based assessment</td>
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<tr>
<td>12. Organize and conduct competency-based assessment</td>
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</tbody>
</table>
Steps in Registration and Accreditation

- Registration of Interest
- Undertake Self Assessment
- Submit formal application
- External Assessment
- Registration/Accreditation
<table>
<thead>
<tr>
<th>WHY National Skills Development Council?</th>
<th>2. Opportunity for industry to identify ways to partner with government in skills development.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opportunity for industry to make government aware of its skills need</td>
<td>3. Feedback to and from separate Industry Skills Councils (ISCs)</td>
</tr>
</tbody>
</table>
Highlights of the Skills Quality Assurance System

**COMPETENCY STANDARDS**

1. Technical Sub-committee will be created to draft the Standards
2. SCDC will also be established to review the standards
3. These standards will be the basis for developing CAD, learning materials and Assessment tools
4. Standards will be register with CBTVET

**Competency- Based Training Delivery System**

1) Mandatory CBTVET Certification of Instructors under CBT&A. Trainer can be also an Assessor.
2) CBLMs must be developed per module
3) Mandatory registration and accreditation of all institutions offering NTVQF
4) Delivery System is Competency Based Training (CBT)
5) Mandatory Compliance Audit of Institutions
6) RPL is implemented

**Competency Assessment Delivery System**

1) Mandatory CBTVET Certification of Assessors. An assessor can also be a Trainer.
2) Everyday is Assessment day
3) Mandatory accreditation of Assessment Centers
4) Assessment is transparent under Competency-Based Assessment
5) Mandatory Compliance Audit of Assessment Centers
6) RPL is implemented

**Competency Certification system**

1) National Certificate will be issued to candidates who have achieved all required competencies defined in a qualification.
2) Statement of Achievement will be issued to candidates who were assessed to be competent in a single or cluster of competencies.
3) NTVQ Certificates will be issued by CBTVET and Institutions can issue training certificates.
4) Validity: 5 years
Next Steps……

- Mandatory migration of existing programs to NTVQ in all government agencies involved in skills development
- Capability and capacity building of these institutions
Thank You !!