International Labour Organization

Hashemite Kingdom of Jordan
E-TVET Council

Centre of Accreditation &
Quality Control

Manual on Skills Testing and Certification

Jordan

Manual on Skills Testing and Certification:

Jordan

2015

Foreword

Skills testing and certification can help youth transition into the labour market by improving the information available to recruiting companies. It also allows for workers in the informal economy to have their skills recognized and facilitates their mobility – their potential shift to formal jobs. In some countries, certificates are linked to wage scales negotiated between social partners. Testing also gives important feedback on training outcomes to training providers and can thereby help improve their programmes. Finally, it provides useful information on the available labour supply for policy-making purposes. Overall, there is a great deal of potential for national testing and certification systems to impact positively on the functioning of labour markets.

In Jordan, the Centre of Accreditation and Quality Assurance (CAQA) was established pursuant to Article (11) of the Employment Technical and Vocational Education and Training (E-TVET) Council's Law (No. 46/2008). According to Paragraph (B-3) of this law, the Centre is entrusted with conducting skills tests and issuing occupational licenses for craftspersons, skilled and limited-skilled workers.

The International Labour Organization (ILO) has provided technical support to CAQA to help implement its mandate through the Decent Work County Programme (DWCP) and the SIDA-funded project *Tripartite Action for Youth Employment in Jordan*. Under this project, the ILO and CAQA have established a framework of minimum requirements for testing and certification, which is presented in this manual. It is hoped that this document will be useful in shaping tests and certification processes to strengthen the trust of employers in CAQA licenses.

The scope of this manual includes the testing and certification procedures directly under CAQA's responsibility (the vocational training track). The Ministry of Labour and CAQA also welcome collaboration with all TVET awarding bodies, including the Ministry of Education and Al-Balqa Applied University, in order to adopt and apply a unified approach to testing and certification in Jordan.

We extend our gratitude to all those who contributed to preparing this manual, starting with the government institutions and social partners involved, the technical team that developed the manual, and all stakeholders who participated in the consultation workshops, and contributed inputs.

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Regional Director for Arab States ad interim   **The Minister of Labour**
International Labour Organization   **Government of Jordan**

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Acronyms and abbreviations

ASCO: Arab Standard Classification of Occupations

CAQA: Centre of Accreditation and Quality Assurance

CBT: Competency-based training

DACUM: Develop a curriculum

DWCP: Decent Work Country Programme

E-TVET: Employment, Technical and Vocational Education and Training

ILO: International Labour Organization

MSME: Medium, small and micro enterprise

NET: National Employment and Training Company

RPL: Recognition of prior learning

TVET: Technical and Vocational Education and Training

TU: Trade union

VTC: Vocational Training Corporation

UNRWA: United Nations Relief and Works Agency

Introduction

This manual contains the minimum requirements for skills testing and certification processes in Jordan. It does not constitute an academic curriculum on assessment methods but is expected to be used as a core reference by test developers and assessors and all those concerned with skills testing in the country, at least for the first three occupational levels (limited-skilled, skilled, and craftsperson).

The manual consists of four chapters, respectively dealing with:

1. a brief description of assessments and tests in Jordan;
2. the fundamentals of assessment and occupational tests;
3. guidance on how to design skills tests; and
4. guidance on how to conduct skills tests.

Based on this manual, a toolkit with examples of assessment tools and skills tests for occupations in auto mechanics, and printing and binding were developed.[1]

All skills tests for the three occupational levels in Jordan should be designed and implemented in close collaboration with CAQA. Remarks and questions related to the application of this manual should also be communicated to CAQA, to assist development of its next version. Indeed, the development of the national framework for testing and certification is a dynamic process that requires close collaboration between CAQA, employers, training providers, social partners and all other relevant stakeholders. It is hoped that this manual will contribute to this development.

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[1] See attached CD

1. Assessment and testing in Jordan

In Jordan, technical and vocational education and training, general education, and higher education institutions assess their outputs through theoretical and performance tests. Students succeed or fail, and are granted educational and occupational degrees and certificates accordingly.

1.1 Education and training system in Jordan

The education and training system in Jordan offers various levels and pathways. It consists of basic and secondary education in schools (under the Ministry of Education), higher education at universities (under the Ministry of Higher education) and community colleges (under al-Balqa Applied University), in addition to vocational training programmes offered mainly by the public Vocational Training Corporation (VTC).

School-based basic education is compulsory and free in public schools. It consists of ten levels (grades). After a student successfully completes the ten levels, and according to their grade average, they can join an academic or vocational track of secondary education or join a vocational training programme.

Secondary education lasts for two years and ends with students sitting for the national general secondary examination (also called "Tawjihi"), which qualifies successful graduates to join public and private universities and community colleges, depending on their grades and resources. Students who attend two years in community colleges prepare for a national test called "Al-Shamel" (the comprehensive one), which qualifies students to join universities (with certain conditions) or to work in the public or private sectors.

Technical and Vocational Education and Training (TVET) in Jordan is implemented through three systems:

- **Vocational Education System.** This is included as part of secondary level education. At the end of these two years, students who wish to enter the labour market directly sit the "Tawjihi exam for Labour Market Requirements", which includes the main general subjects (Arabic, English, Information Technology, etc.) and basic vocational subjects. These students may also join certain specialisations in community colleges. Students who wish to enter universities and community colleges have additional subjects for their Tawjihi exams.

- **Vocational Training System.** The Vocational Training Corporation (VTC), the National Employment and Training Company (NET), UNRWA, and some private training providers are the main providers for these one to two-year programmes with three occupational levels – limited-skilled, skilled, and craftsperson – with no direct pathways to universities or community colleges.

- **Technical Education System.** This is conducted in public and private community colleges and leads to the "Al-Shamel" exam.

Table 1-1 TVET Systems in Jordan

	Vocational training	Vocational education	Technical education
Delivery location	Vocational centres/institutes (accredited by CAQA)	Secondary schools	Technical/community colleges
Certificate	1. Vocational Certificate 2. Occupational Practice License	1. General Secondary Certificate (Tawjihi) –vocational stream 2. General Secondary Certificate (Tawjihi) –vocational stream, labour market track	Al-Shamel

Awarding body	1. Accredited vocational training institutes, (CAQA should endorse the certificate) 2. CAQA	Ministry of Education (MOE)	Al-Balqa Applied University(BAU)
Career path	In principle, certificate qualifies graduates to work	1. Certificate qualifies in principle graduates to work and/or access higher education (universities and community colleges) 2. Certificate qualifies in principle graduates to work and/or access community colleges with certain conditions	Certificate qualifies in principle graduates to work and/or access universities under certain conditions
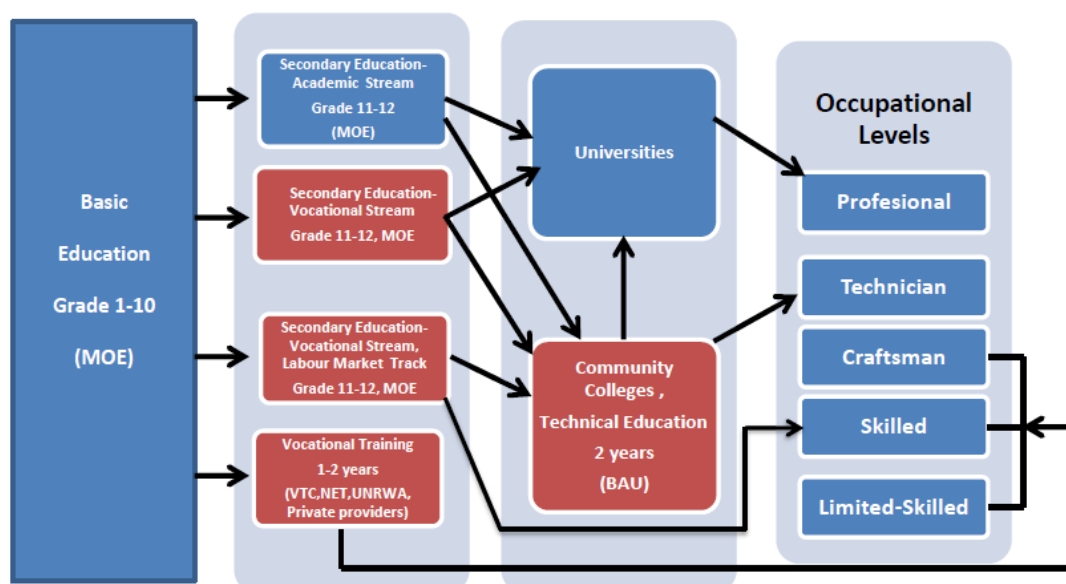
Figure 1-1 Education, training and career paths in Jordan

1.2 ASCO and NQF in Jordan

Jordan has adopted the Arab Standard Classification of Occupations (ASCO 2008)[2] and its five main categories of occupational level . ASCO [1] is a system of naming and classifying occupations in order to provide a unified nomenclature for the occupational structure of the workforce in the Arab region. It helps in the collection and dissemination of labour market information and analysis, by defining five categories of occupational level in terms of duties and tasks (as well as related skills):

▪ **Professional level** includes jobs that require a high level of cognitive, technical and administrative skills that enable the employee to monitor workers, evaluate achievements, and solve problems in the workplace. It requires university education.

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[2] Based on the International Standards Classification of Occupations (ISCO 88)

- **Technician level** includes jobs that require scientific, technical, and supervision skills to understand and analyse performance and identify achievement. Technician level requires at least training or college level education (general electrical technician, assistant pharmacist, etc.).

- **Craftsperson level** includes those able to work with a high level of technical expertise, lead a team and build its capacity. This level requires at least one year of training after secondary education (general mechanic – light vehicles, women hairdresser, etc.).

- **Skilled level** includes jobs that require part of the competencies for a defined occupational field. This level requires vocational training (mechanic – light vehicles, pipe welder, etc.).

- **Limited (Semi)-skilled level** includes jobs that involve routine tasks and require a narrow spectrum of occupational knowledge and practical skills learned through short-term training courses (less than nine months), informal apprenticeship, or self-leaning (sweeper, assistant pipe welder, etc.).
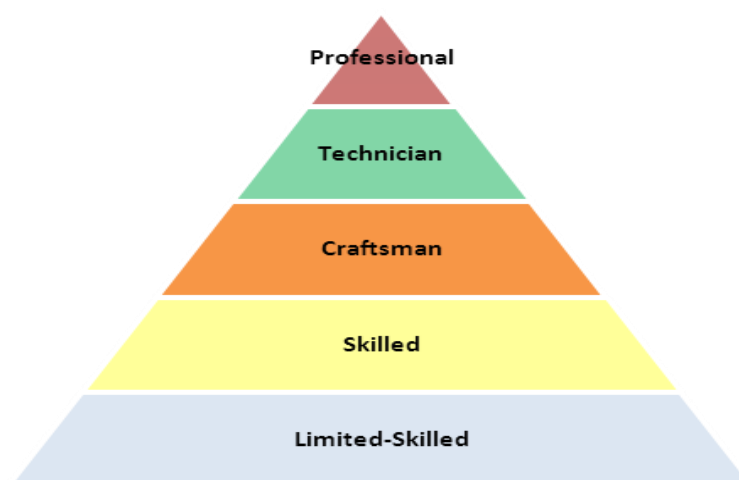
Figure 1-2 Categories of Occupational Levels in Jordan

Table 1-2 Example for duties in ASCO for different occupational levels

Occupation/Job	Occupational level in ASCO	Examples of related duties	Notes
Mechanical engineer – automotive	Professional	Manage auto workshop/garage Manage maintenance work Manage customer needs Prepare technical reports Lead and train staff	Works alone
Mechanical technician – light vehicles	Technician	Diagnose vehicle systems Monitor repair work Test vehicle before delivery to the customer Prepare work reports Lead and train staff	Works alone or under supervision of mechanical engineer – automotive
Mechanic – light vehicles general	Craftsperson	Install auto workshop facilities/equipment Implement preventive maintenance programs Service and repair auto systems	Works alone or under supervision of mechanical technician – light

		Fill out work forms/templates Manage and train staff	vehicles
Mechanic – transmission, light vehicles	Skilled	Service and operate vehicle lifts Diagnose and repair gearing, clutches, axles, drive shafts, etc.	Works alone or under supervision of mechanic – light vehicles general
Mechanic – Lubrication, motor vehicles	Limited-Skilled	Service and operate air compressors Service and operate vehicle lifts Change oil for engine, gear box, axles, brakes, clutch, steering Service vehicle battery	Works alone or under supervision of mechanic – light vehicles

With Technical Assistance of European Union (EU), Jordan started in 2014 developing a National Qualifications Framework (NQF) based on the European Qualifications Framework (EQF), where the Technical Vocational Qualification Framework (TVQF) is a sub-framework of the NQF with 4 levels. TVET qualifications on Levels 1-3 will be considered broadly comparable with qualifications offered in the General Education sub-framework, and TVET qualifications at Level 4 are likely to be considered broadly comparable with qualifications offered at the lowest level of the Higher Education sub-framework.

Table 1-3 Scope of the TVQF qualifications sub-framework

General Education Sub-Framework		TVET Sub-framework (TVQF)		Higher education Sub-Framework	
				7	
				5	
				5	
		4	Technical Diploma	4	
3		3	Vocational Diploma		
2		2	Certificate Level 2		
1		1	Certificate Level 1		
Access					

Table 1-4 Occupational awards and training awards

Occupational Level	Occupational Awards (occupational licences)	TVQF level	Qualifications	Training Award (short training certification)
Technician level	Level 4 Occupational Award	4	Technical Diploma	Level 4 Training Award
Craftsperson level	Level 3 Occupational Award	3	Vocational Diploma	Level 3 Training Award
Skilled level	Level 2 Occupational Award	2	TVET Level 2 certificate	Level 2 Training Award
Limited skilled level	Level 1 Occupational Award	1	TVET Level 1 certificate	Level 1 Training Award

The level descriptors of the TVQF are based on the level descriptors of the EQF, with modifications for close alignment with the existing system of Occupational Levels in Jordan.

Table 1-5 Occupational awards and training awards

	Knowledge (factual & theoretical)	Skills (cognitive & practical)	Employability skills
Level 4 Technical diploma	Comprehensive, general and specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge.	A comprehensive range of transferable and specialised cognitive and practical skills required to develop creative solutions to abstract or non-standard problems and report outcomes.	Manage and supervise people, materials, equipment, health and safety, sustainable environment and quality assurance in contexts of work or study activities where there is unpredictable change. Review, manage, mentor and develop performance of self and others.
Level 3 Vocational diploma	Factual and supporting knowledge in broad contexts within a field of work or study.	A range of cognitive and practical competencies required to generate solutions to specific problems in a field of work or study and report outcomes as required.	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change. Supervise the routine work of others and provide training to subordinates, taking responsibility for health and safety, equipment, materials and human resources and for quality assurance and quality improvement of work or study activities.

Level 2 **Certificate level 2**	Knowledge of facts, principles, processes and general concepts in a field of work or study.	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information.	Take responsibility for completion of tasks in work or study; adapt own behaviour to circumstances in problem solving.
Level 1 **Certificate level 1**	Basic factual knowledge of a field of work or study.	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools.	Work or study usually under supervision and with some autonomy.

Table 1-6 Qualification types and specifications

Qualification name	Purpose	Entry level	Volume of learning	Progression pathway
TVET Level 1 certificate	Qualifies individuals to carry out semi-skilled tasks using basic knowledge and practical skills usually under supervision, **and progress to level 2.**	16 years old literate	40-70 credits (nominal 6 months)	TVET Level 2 certificate
TVET Level 2 certificate	Qualifies individuals to apply knowledge and practical skills to the achievement of tasks in specific fields requiring skill and self direction, **and progress to level 3.**	TVQF Level 1 certificate 16 years old 10th grade	Min 120 credits (nominal 12 months)	TVET vocational diploma
TVET vocational diploma	Qualifies individuals to apply knowledge and skills to solve problems in specific field and to manage their own work and supervise others, **and progress to level 4.**	TVQF Level 2 certificate Grade 12 certificate Or entry test 18 years old	140-180 credits (nominal 18 months)	TVET technical diploma
TVET technical diploma	Qualifies individuals to apply specialist knowledge and skills and supervise others to develop creative solutions to problems and improved outcomes, **and progress to level 5.**	TVQF Level 3 certificate Or Tawjihi 18 years old	240 credits (nominal 24 months)	Applied higher education programmes

1.3 Assessment in vocational training programmes in Jordan

In **vocational training,** assessment currently varies according to the training provider. For example, at the Vocational Training Corporation (VTC), 80 per cent of the final mark of the trainee is determined by the final examination (written and practical tests), conducted by the skills testing department (in VTC) at the end of the programme. The remaining 20 per cent is assessed by instructors throughout the whole programme (including written tests, homework, practical tests, etc.).

> **Vocational training assessment in Germany**
>
> In the dual system of vocational training in Germany [19], every trainee must sit an intermediate examination during the training period, as well as a final test.

> General/school education assessment and evaluation in most Arab countries depend on summative assessment and written tests. Some countries, like Jordan and the Kingdom of Saudi Arabia, use other assessment methods, including continuous assessment along with final written tests.

1.4 Legal and policy framework for skill testing in Jordan

There are several national laws and policies that relate directly to skills testing and certification of the vocational training path. The contents of the manual are in line with these documents. Here are the main national laws and polices:[3]

- Employment, Technical and Vocational Educational and Training (E-TVET) Council's law 46/2008 – pursuant to Article (11) of the law, the Centre for Accreditation and Quality Assurance (CAQA) was established as the institution for skills testing and certification for vocational education and training.

- The centre for Accreditation and Quality Assurance by-law 35/2012 – articles 13-16 regulate the awarding of the occupational license in Jordan.

- The internal CAQA regulation for administration of the occupational tests and awarding of the occupational license, 2013.

- The Regulation for Occupational Work in Jordan Law 4369/1999 – Articles 7-9 deals with occupational levels, occupational licenses, and license fees.

According to paragraph (b) of article 11 of the Employment, Technical and Vocational Educational and Training (E-TVET) Council's Law 46/2008, CAQA is entrusted with the following duties and authorities:

- developing technical and vocational education and training standards to control training outcome quality and refer them to the E-TVET Council for endorsement;

- licensing and accrediting technical and vocational education and training institutions;

- conducting occupational tests for technical and vocational practitioners and awarding occupational licenses.

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[3] Appendix A (see attached CD)

In accordance with Regulation 35/2012, CAQA responsibilities are further detailed in its bylaw:

- Preparing standards for accreditation and quality assurance of vocational training.

- Defining standards for vocational teachers and instructors.

- Designing and conducting skills tests for Limited-Skilled, Skilled, and Craftsperson levels.

- Setting up a national bank for theoretical and practical tests with relevant institutions and the private sector.

- Monitoring training providers' compliance with this regulation.

The CAQA Steering Committee, chaired by the Secretary General of the Ministry of Labour, was formed pursuant to Article 4 of CAQA's bylaws with:

- CAQA Director as Vice President;

- a representative of the Ministry of Education;

- a representative of the Jordanian Armed Forces;

- a representative of the Vocational Training Corporation;

- a representative of the Higher Education Accreditation Commission;

- a representative of a state university chosen by the Minister; and

- two experienced and competent persons from the private sector representing the sectors concerned with the CAQA work chosen by the Minister for two renewable years.

1.5 Occupational practice license

According to CAQA 2013 regulations for administering occupational tests and awarding occupational licenses, a skills test is defined as a tool for measuring people's knowledge and skills at the time of the test. It consists of a theoretical test (for the knowledge part of the competency), and the practical test (for skills and attitudes).

Skills tests should comply with three requirements:

- **Occupational standards**, which specify duties, tasks, skills, and performance criteria. CAQA has already developed occupational standards for several occupations in Jordan, and continues to do so with the support of the EU, and aims to develop national standards for all occupations, based on the Arab Standard Classification for Occupations (ASCO). Between one-third and a half of the committee members who develop these standards are private-sector skilled workers, and lead most of these committees. Other members come from employers' organizations, chambers of industry and commerce, and public training providers' representatives.

- **Occupational levels.** According to the Jordanian law *Regulating Occupational Work* and ASCO 2008, five occupational levels have been adopted: Limited Skilled, Skilled, Craftsperson, Technician, and Professional. CAQA's regulations for administering the occupational tests divides the craftsperson level into two classes – 1st and 2nd class. CAQA's mandate on skills tests are related to three lower occupational levels. European Training Foundation (ETF) is supporting Jordan to develop a national qualification framework.

- **Methodologies, strategies, and tools for designing and conducting skills tests.** This is the main purpose of this manual.

The Occupational License is a document issued by CAQA. This license is considered a passport to enter the world of work, because it informs employers of the job seeker's competencies. The occupational license is awarded to the following categories of candidates, as per the conditions expressed in CAQA regulations:

- Graduates of the General Secondary-Vocational Stream, Labour Market Track are automatically awarded an occupational license for skilled levels.

- Graduates of public institution training programmes accredited by CAQA are automatically awarded an occupational license.

- Graduates of a private organization training programme accredited by CAQA are awarded an occupational license after a theoretical skills test.

- Workers (practitioners) are awarded an occupational license after theoretical and practical tests, as per the regulatory conditions.

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Figure 1-3 Sample of occupational license

Pursuant to the Jordanian Cabinet's decisions[4], occupational licenses are required for workers in eight occupations/skill areas, with a grace period of three years, extendable to five, from the date of publication, as shown in the table below. Workers in other occupations may also apply for tests and occupational licenses.

Occupation	Date of publication
Driving and maintenance of vehicles and machines	12/6/2000
Carpentry and decoration	12/6/2000
Metal formation and mechanical maintenance	10/10/2000
Personal services (hairdressing and cosmetology)	12/6/2000
Air-conditioning and sanitary plumbing	1/1/2004

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[4] VTC annual report 2011 (www.vtc.gov.jo)

Electricity (power)	1/1/2004
Construction	1/1/2004
Electronics	1/1/2004

Summary

The education and training system in Jordan offers various levels and pathways. TVET in Jordan is implemented through the Vocational Education System as part of secondary level education, the Vocational Training System (under various institutions), and the tertiary Technical Education System. Jordan has adopted the Arab Standard Classification of Occupations (ASCO 2008) and its five main categories of occupational levels. The Centre for Accreditation and Quality Assurance (CAQA) has a legal mandate to administer skill testing and certification for the limited skilled, skilled and craftsperson levels, and to issue related occupational licenses.

2. Introduction to assessment and skills testing

Mohammad is a trainee in a skilled level vocational training programme. The training centre uses several **assessment** methods/strategies to **measure** Mohammad's performance, including **skill tests**. The centre also **evaluates** the overall class performance in order to improve the training programme.

2.1 Assessment concept and typology

The ultimate purpose of a skills test lies in its ability to directly assess a person's competency. Occupational competency is defined as the ability to accomplish a range of tasks according to the expected standards in a real work environment. Testing and certification helps ascertain whether a person is competent or not for a given occupation. Tests are consequently composed of elements designed to measure the knowledge, skills, and attitudes of the candidate.

Assessments are either competency-based or not. The outcome of a competency-based assessment is a decision on whether the candidate is competent or not, as opposed to having scored a certain percentage on a grading scale.

Ultimately, the final decision is based on an analysis of information compiled from various assessment strategies/methods. Assessment evidence is the information and data collected about the candidate during the assessment process; this information is compared with standards to give evidence of the candidate's competency. Evaluation involves the analysis and interpretation of these results in order to provide a final decision on the candidate, and to improve the training programme. Various types of assessment strategies are presented below:

- **Formal/informal assessment.** Formal assessments use pre-defined frameworks to assess the candidates' competence. School and university exams, also "Tawjihi" and ""Al-Shamel" are formal assessments. An informal assessment is often conducted through trainer-learner interactions, and the recorded remarks on the trainee's performance.

- **Summative (final or post-test) and formative assessment (continuous).** Summative assessment is conducted at the end of the learning period while continuous assessment is implemented alongside the training process.

- **Process assessment and product assessment.** In a process assessment, performance steps are assessed, while a product assessment is conducted on the outcome product/service produced by the candidate.
    - A **process assessment**, for instance, would include observation of the candidates disassembling and reassembling engine parts, while a product assessment will look only at whether the engine is repaired. Process assessments are often used for critical tasks, and for tasks related to occupational safety and health. There is a need for designing standard assessment forms and tools (checklists, rating scales, etc.) to maintain objectivity during the process assessment. A process assessment would answer the following questions [2]: Were tasks conducted appropriately, safely, and in the correct sequence? Were they completed within the time limits?
    - A **product assessment** is more objective than the process method with pre-set standards for design and accuracy. It may answer the following questions [2]: Does the end product meet design specifications? Does the end product have an elegant appearance? Does the end product fulfil safety standards?

- **Direct/indirect assessment strategies.**
    - **Direct assessment strategies include direct observation, questions and presentations.** Direct observation involves observation of the

trainee's/candidate's performance in a defined work environment – at the workplace or in circumstances that simulate a real work environment. Observation may focus on process or both process and product. Questions can be asked as part of an interview or during the direct observation (support questions). Presentations can also provide examples of skills, products, and services.

- o **Indirect assessment evidence methods** include an assessment of the end product, written tests, and assessment of the candidate's previous work.

- o **Supplementary assessment evidence methods** include a performance portfolio, skills and previous work portfolios, as well as reports and testimonials from employers, supervisors and colleagues.

▪ **Project assessment methods** are often used for advanced competencies that involve autonomy and critical thinking. Candidates are assessed individually or collectively on whether they achieve planned objectives using limited resources within a specified period of time. The assessor may evaluate the project implementation plan, the project implementation, the end product, or the time used. Collective assessment will also allow for evaluating teamwork skills.

▪ **Simulation assessment strategies** evaluate competencies as part of real work scenarios in an environment resembling, to a certain extent, a real workplace. Scenarios may include problems that the future worker will likely face. Methods of simulation vary from simple role play to the comprehensive re-creation of a real work environment – for instance, a flight simulator. When designing a test, the focus should be on creating work situations in which the trainee will be able to demonstrate a wide range of skills, including technical skills, supporting knowledge, general skills such as decision making and problem solving, and effective communication.

▪ **Interview and question-based assessment strategies.** The oral test is used either for language speaking skills (as a performance test), or to complement other tests, or when no other tests would work (i.e. the test of last resort). An oral test can be built as a planned interaction with the assessors, with a pre-defined tree of questions and answers that add gradually to the complexity of the issues discussed, and direct the choice of the assessors related to the actual competency of the candidate. Interviews may also allow for judging how the candidate thinks and interacts under pressure, and for assessing other 'soft' skills, including self-confidence, analytical skills, focused attention, and capacity to articulate a case.

▪ **Performance portfolio assessment method.** This can be used by assessors to evaluate trainees' performance, or by recruiters to evaluate job candidates. A performance portfolio consists of pieces of evidence of the candidate's competencies. It may include the contents and examples of recent training programmes, training and assessment records, duties and tasks assigned in past/current jobs, assessment of class or individual activities, exam papers the trainee/student sat for, examples of products (e.g. technical drawings or photos), certificates awarded, work diary, references and testimonials, and life experiences.

2.2 Six basic principles for testing and certification

1. Testing methods should be in line with the entire competency in focus. The assessment of a person's capability should focus on mutually reinforcing knowledge, attitude, and skills that allow a person to accomplish the given tasks. For instance, a simple description of the steps required to disassemble vehicle parts would not be considered

adequate for testing a future auto mechanic worker; the ability to describe is different from the ability to actually do the job. For such tasks, a performance test is required.

It is important to emphasise that **knowledge is a necessary but insufficient element to declare a person competent**. Academic knowledge of car mechanics is useful but will not be sufficient to establish whether a person is competent to repair vehicles.

Likewise, **kinetic behaviour is a necessary but insufficient element of a test**. There is a tendency in TVET to link performance tests exclusively with kinetic behaviour and visible/tangible results (disassembling vehicle engine parts etc.), while cognitive capabilities are sometimes not taken into account. This approach risks leaving aside the capacity of the candidate to differentiate between the functions of the engine parts, for instance.

Skills tests must not only concentrate on the candidate's performance in ideal situations, but also on the candidate's higher level skills and critical thinking in authentic situations when something wrong happens (such as their behaviour when a malfunction occurs with the machine they are working on).

Core work skills (employability competencies[5]) should be included in all tests. In all jobs, workers need to be able to communicate with each other, use information and communication technology, work with each other, solve problems, exercise numeracy skills, and so on. Skills tests should be able to assess these "Workplace Core Skills" that are required for all workers, and all jobs.

2. Assessment strategies vary from country to country but the competency-based approach is the most relevant. Some countries adopt a marks-based approach for grading, while others opt for an outcome-based assessment that explicitly states whether the person is competent or not – qualified or unqualified. The competency-based approach is the most appropriate. If someone wants to recruit a plumber, she/he is not directly interested if they are competent at 72 per cent, for instance. It is, however, possible to set a minimum standard for each performance component – the candidate should pass this standard to be considered competent. A "full mastery" of some performance components would also be required, such as those directly related to occupational safety and health or other critical technical competencies.

3. There is a need to foster a wide engagement of relevant partners in the design, implementation and review of testing processes. Public and private companies, employers' organizations, trade unions, training providers, government institutions, master craftspersons, municipalities, local communities, assessors and test developers, occupational experts, and small enterprises all have a role to play. The wider the involvement, the greater the national recognition of assessment and occupational certificates will be. Stakeholders can also contribute to the system, and improve the transparency of the process.

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[5] *Duties* and *tasks* are the terms used in the Jordanian occupational standards developed by CAQA. Currently, CAQA is working on new occupational standards with the support of the EU. In the new standards, the term *employability competencies* (communication, team work, problem solving, etc.) will be used in addition to duties and tasks.

A testing and certification process led by employers and workers in Germany

In Germany [19], examinations of school-based training are organized and implemented by the state, while chambers of commerce organize and supervise interim and final examinations for work-based training. To hold these examinations, the responsible chamber will establish boards of assessors consisting of at least three members of employers' and employees' representatives, in addition to a vocational school teacher. Rules to be observed in connection with final examinations are issued by the Vocational Training Committee of the Chamber. These rules set out the entry criteria, the form of the examination, the criteria for marking, the arrangements for issuing certificates, the consequences of breaches of the rules, and possibilities for repeating the examination. In occupations that have a large number of trainees, central exercise creation centres were established to develop uniform, nationwide examination exercises for the various occupations:

- For **commercial examinations**, the Aufgabenstelle für kaufmännische Abschluss und Zwischenprüfungen (www.ihk-aka.de). Also, the Zentralstelle für Prüfungsaufgaben ZPA Nord-West (www.ihk-zpa.de).

- For **examinations in the industrial/technical area,** the Institute of Development for Examination Exercises and Teaching Aids (Prüfungsaufgaben und Lehrmittelentwicklungsstelle – PAL) of the IHK Region, Stuttgart (www.ihk-pal.de).

- For **examinations in the print and media area,** the Central Technical Committee for VET in print and media (Zentral-Fachausschuss Berufsbildung Druck und Medien) (www.zfamedien.de).

Every year new semi-final and final tests are applied simultaneously throughout Germany. They include detailed written and practical tests, lists of equipment, tools, measurement means, and materials required for testing. This helps companies in which tests will be conducted to get ready at the designated time.

4. There is a need to define standard test circumstances, as closely as possible to the reality of the workplace. Circumstances in which skills tests are carried out vary from the ideally suitable to the less authentic. The real work environment represents the best place for conducting performance and competency tests. The more authentic the assessment process, the more effective the trainee's performance assessment will be. On another hand, standardized skills test circumstances are required for skills testing – to be fair for all candidates.

5. Recognition of prior learning (RPL) is to be encouraged as an important contributor to labour market mobility and formalization. In practice, RPL is the process of assessment and certification that proves a person's competency, based on occupational standards, regardless of how these competencies were acquired (formal/informal training, work experience). RPL is important for self-employed persons looking for jobs, workers seeking career progression, workers of the informal economy wanting to shift to formal jobs, and practitioners wanting to enter an educational pathway. RPL may also be of great importance in the context of migration where it allows workers to have their skills recognized from their countries of origin, after the migration period.

Requirements for applying recognition of prior Learning

The Authority of Vocational Education and Training in Tanzania, supported by the International Labour Organization (ILO), prepared a guide about recognition of prior learning in Tanzania [7]. The manual listed important assumptions behind the implementation of an RPL policy, including:

- effective involvement of employers and people working in design and implementation of the assessment;

- strong coordination between government authorities and training providers which impact capacity of certificate holders to access learning pathways;

- the existence of systems supporting standards development, assessment tools and methodologies, availability of competent assessors, and monitoring and evaluation;

- flexible qualification system and competency standards that take into consideration the possibly narrow field of skills for the people working particularly in informal economy;

- development of innovative methodologies to assess skills and knowledge, in particular in the informal economy;

- clear and sustainable financing system especially since (a) financial support may be required for the candidates, (b) portfolio based assessment may be costly to arrange;

- ensuring the validity of certificates of recognition of prior learning and equating them to formal degrees.

6. **Testing and certification are costly exercises that should rely on all available sources of funding, for the various stages**. The financing framework should take into account the importance of including all costs for reliable and valid testing, and the need for widespread implementation. Costs may include:

- **A test-design stage.** Costs of occupational analysis, DACUM workshops (if needed), test developers' wages/fees, developers' training, printing and distribution of tools for designing tests, printing and distribution of test questions, collecting assessment evidence, remuneration of institutions where test developers work for their partial or whole engagement, and costs of meetings, workshops, and training sessions.

- **Test implementation.** Wages/fees of assessors and test supervision committees, their transportation, meetings and training costs, materials consumed during test implementation, cost of using private sector institutions as testing centres, or using equipment from the private sector, and additional costs if tests need to be adapted to persons with disabilities.

- **CAQA quality control**, including costs that are linked to the oversight exercised by CAQA on test design and implementation.

Fees for skills tests

Benin

In Kandi, the cost is approximately 5,000 FCFA (USD 10.20) paid to small industry organisations (SIOs) (national multi-trade federation) divided among the assessment committee, national associations and the SIO leading the procedure. Today, apprentices have to pay USD 10.20 for the certificate issued by government, and another USD 10.20 for test materials. In Djougou, the cost is higher and reaches USD 16.30 for registration for the test and USD 40.70 for obtaining the certificate for all professions and applicants have to provide their own test materials [5].

Exchange rate: 1 USD=490.88, date 14 Aug. 2014,
http://themoneyconverter.com/USD/XAF.aspx

Cameron

USD 101.90 is paid for Inter-sectoral Craft-workers Association (GIPA). Some 75 per cent of this covers the cost of test materials (such as wood and clothes) and electricity [5].

Ghana

In the proficiency assessment of hairdressers, for example, an applicant pays the equivalent of USD 14 as a fee to the hairdressing SIO for test organization. The fees for national trade tests are approximately twice the fee for proficiency assessment and charged directly by the national authority [5].

Jordan

Test fees vary according to occupational levels accordingly: (a) 40 JD (Jordanian Dinars) (USD 56.50) for craftsperson level; (b) USD 42.37 for skilled level; (c) USD 28.20 for limited-skilled level. For all occupational levels, applicants should also pay USD 14.10 for issuing or renewing their occupational practice license and USD 7.06 in case of a lost or corrupted license. (see appendix A)

Exchange rate: 1 JD=0.708, 14 Aug. 2014, Central Bank of Jordan

It should be emphasised that test fees should take into account (a) direct costs and opportunity costs, (b) the purchasing power of the test candidates, and (c) the market value of the certificate. In Jordan, there are no testing fees for trainees in the public sector, but CAQA charges fees for testing practitioners and trainees from private-sector training providers.

Summary

Occupational competency is defined as the ability to accomplish a range of tasks according to certain expected standards within a real work environment. Assessments are either competency-based or not. Other assessment strategies include formal vs. informal, summative vs. formative, and process vs. product assessments.

Assessment evidence is the information and data collected about candidates during the assessment process; this evidence is compared with standards in order to assess a candidate's competency. Assessment evidence may be collected through direct assessment methods, indirect assessment methods, or supplementary assessment methods. The main assessment methods/strategies include process, product, project, simulation, interview, and performance portfolio assessment methods.

Testing and certification systems should be developed based on the following six basic principles:

- testing methods should be in line with the competency in focus and mutually reinforce knowledge, attitude, and skills that allow a person to accomplish the given tasks;

- assessment of candidates varies from country to country. Competency based assessment is the most effective;

- there is a need to foster a wide engagement of relevant partners in the preparation, implementation and review of testing processes;

- there is a need to define standard test circumstances to be as close as possible to the reality of the workplace;

- recognition of prior learning (RPL) should be encouraged; and

- testing and certification are costly exercises that should rely on all available sources of funding for the various stages.

3. Designing Skill Tests

Test designers are selected based on a number of requirements[6]. They should demonstrate a capacity to design tests with CAQA approved methods and strategies. They should also understand and comply with laws and regulations governing skills testing, use Arabic language, understand the national occupational classification and ASCO, as well as the description of occupational standards, be academically qualified or have relevant work experience, and attend a CAQA one-week training course on developing skills tests. Practitioners/skilled workers should play a significant role in designing skills tests.

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[6] ILO-CAQA training workshop for skills test designers, 29 September–1 October, 2013, Amman.

This chapter describes the seven-step process for test designers to develop tests. Some of the steps related to theoretical and practical tests can be implemented in parallel.

Step 1 - Identify duties and tasks	**Step 6 - Design Assessment Tools for Practical Tests**	**Step 7 – Finalize the theoretical test and the assessment tool(s)**
Step 2 - Design a Test Specifications Table	**Step 5 – Build an Evidence Matrix**	
Step 3 - Design theoretical skill test	**Step 4 - Select suitable assessment methods for practical skills test**	
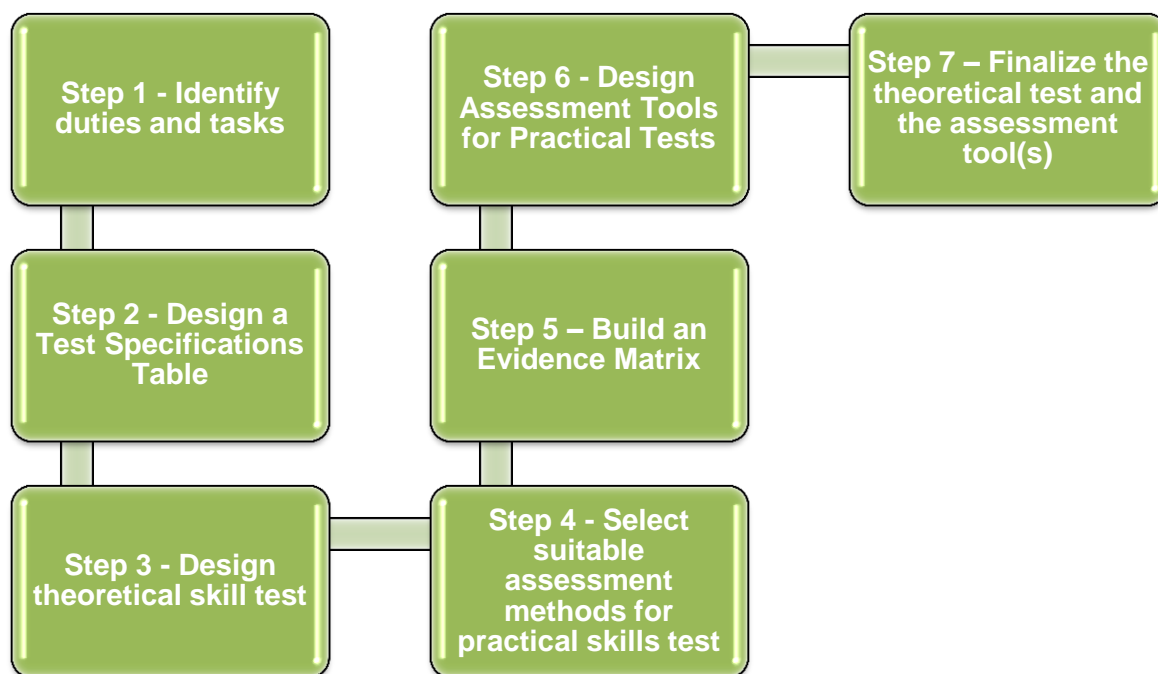
3.1 Identify duties and tasks (Step 1)

Skills tests measure the candidate's capability to perform duties according to specific occupational standards, derived from a national standard classification of occupations.
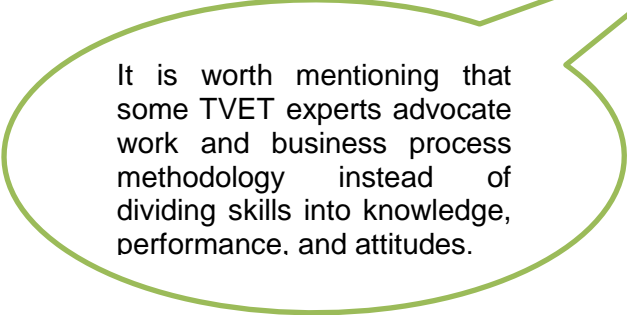
In Jordan, CAQA so far developed – with the private sector – national occupation standards for six occupations and skill areas with the following structure:

- occupation duties and tasks;
- skills for each task;
- performance assessment criteria;
- significance and nature of each skill (cognitive, performance or attitude);
- employability skills needed for the occupation;
- training specifications;
- underpinning knowledge;
- practical training needed.

3.2 Design a test specifications table (Step 2)

Skills tests are built on the duties, tasks and skills or learning outcomes for a specified occupation. Learning outcomes are a statement of a learning achievement expressed in terms of what the trainee is expected to know, understand and be able to do in the skills tests or on completion of learning. They may also include attitudes, behaviours, values and ethics.

A test specification table shows duties, tasks, and learning outcomes (knowledge, performance, or attitudes) and their level, according to Bloom's taxonomy, and their degree of significance. Learning outcomes are classified into high, medium, and low significance outcomes. The significance of the learning outcomes should be determined by consultations with qualified practitioners from the private sector.

It is worth mentioning that some TVET experts advocate work and business process methodology instead of dividing skills into knowledge, performance, and attitudes.

The specification table will help in identifying relevant test questions, particularly for the theoretical test. The table also helps in specifying the weights and marking distribution for the test questions and performance elements. The table below represents part of specification table of a skill set for the job " Printer, offset/sheet-fed". Appendices B and C in the attached CD also include complete test specification tables for two occupational jobs (in auto repair and printing & binding).

It is important that skills tests also measure higher cognitive levels as the labour market requires higher creative thinking skills as part of the new knowledge based economy.

In **Bloom's taxonomy**, three overlapping domains (cognition, psychomotor, and affect) are included in learning outcomes. For the cognitive domain, Bloom identified six levels, from the simple recall or recognition of facts (lowest level) to the more complex synthesis and evaluation of ideas (highest levels).

Level 1 – Knowledge. Basic recall of information (define, identify, label, list, match, name, order, recall, recognize, state).

Level 2 – Comprehension. Understand the meaning and interpretation of information and problems (classify, describe, discuss, explain, express, report, restate, review, translate).

Level 3 – Application. Apply what was learned in the classroom to novel situations (apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write).

Level 4 – Analysis. Break down material or concepts into component parts so that the organizational structure may be understood (analyse, appraise, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test).

Level 5 – Synthesis. Use component parts to form a new whole, with emphasis on creating a new meaning or structure (arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up).

Level 6 – Evaluation. Judge the value of material (appraise, argue, assess, defend, estimate, judge, predict, rate, support, value, evaluate).

Table 3-1 Part of specification table for skill test- Offset Printing/sheet fed

Skill Test Specification Table

Skill Test Specification Table

Sector: Printing and Binding   Occupation: Printing   Job Name: Offset Printing/sheet fed   Job Code: 7342054   Level: Skilled

Duties and Tasks	Learning Outcomes	Outcome Significance	Evaluation	Synthesis	Analysis	Application	Comprehension	Knowledge	Skills	Attitude
Prepare and inspect the plate offset printing machine	Recognize the offset printing machine, parts and operation	1					*	*		
	Recognize the instructions for adjusting and calibration of the offset machine	1					*	*		
	Wear the special work clothes	1				*	*	*	*	*
	Perform disassemble and assemble of the printing machine	1		*	*	*	*	*	*	*
	Perform the adjusting and calibration of the machine according to the instructions	1	*	*	*	*	*	*	*	*
	Operate the offset printing machine	1					*	*	*	*
Carry out printing using the plate offset printing machine	Recognize the operating troubles and factors affecting the performance	1					*	*		
	Print testing experimental jobs and compare to printing order	1	*	*	*	*	*	*	*	*
	Observe the results of printing for colour stability and printing order	1	*	*	*	*	*	*	*	*
	Resolve all problems and failure	1	*	*	*	*	*	*	*	*

(Outcome Nature: Cognitive columns = Evaluation, Synthesis, Analysis, Application, Comprehension, Knowledge; plus Skills, Attitude)

3.3 Design a theoretical skills test (Step 3)

In Jordan, theoretical tests are conducted separately from practical ones. There are a multiple choice tests measure capabilities in various levels of cognitive competencies related to the understanding of principles, facts, concepts, and theories, according to the test specifications table.

Theoretical test questions and paragraphs should be specific, accurate, and clear. They can be categorized into essay questions and objective paragraphs [1].

Essay questions are categorized into three types:

- **short answer essay questions,** which focus on briefly defining, interpreting and explaining a matter at hand;

- **long answer essay questions,** which ask the candidate to provide a more in-depth answer; and

- **completion questions**, which provide a space for the candidate to fill in with a word, symbol, name or term (e.g. "Complete the space in the following statement: The primary circuit in the electronic ignition system is opened and closed via …").

Objective paragraphs help achieve the highest level of objectivity through:

- **true and false paragraphs**, where the candidate is requested to decide whether proposed statements are true or false (e.g. Answer the following with True or False: "Higher engine speeds lead to an increase in oil consumption ( )";

- **pairing paragraphs (matching)**, where the candidate is required to pair statements from two columns. For example,

Match the statements between the following two columns:

١	Water is used in offset printing systems to …	١	accomplish the process of separation between printing areas and non-printing areas
٢	The wad of printing plates in the offset printing machine is used to …	٢	prevent the passage of dual paper
٣	The coupling sensor in the printing machine aims to …	٣	reset fixing rulers
٤	To fix printing plates on offset machine cylinders, it is necessary to …	٤	arrive at suitable compression values
		5	decrease sound of the machine during operation
		6	prevent ink dryness

- **multiple choice paragraphs**, where the candidate is requested to choose between several possible answers or several possible assertions to complete a proposed statement. For example,

Put a circle around the symbol of the correct answer:

The purpose for the presence of two lines at the start of printing at the bottom of the printing plate and on its side is to:
a. enable the offset printer to specify sequence in colour typing;
b. enable the offset printer to control colour equilibrium;
c. enable the offset printer to evaluate visual displacement; or
d. enable the offset printer to evaluate visual deviation.

The following table [1] presents a comparison among various types of theoretical test questions and paragraphs:

Table 3-2 Comparison among types of theoretical test questions

Type of questions/ paragraphs	Assessment scope	Characteristics	Directions to test designers
Short essay	All cognitive levels	The answer includes at most three paragraphs or 250 words. Mainly tests the relationship between two concepts.	The answer should include one or two specific ideas. Set clear instructions and standards for answering.

Long essay	All cognitive levels	In most cases, they assess more than one learning outcome.	Give clear directions about answer length and context. Set clear standards for answers. Give sufficient time for answering. Give weight for communication skills.
Essay completion	Lower cognitive levels	Use of simple paragraphs. Used for vocabulary and word meaning tests.	Test only one main idea. Test concepts and terms. Put a space at the end of the paragraph. Limit answer choices.
Objective, true/false	Lower cognitive levels	50% estimation chance. Speed of correction. Effective in formative assessment.	It is preferred to write the paragraph in the affirmative. Only test one idea per test item. Ensure answers are susceptible only to true or false and there is no third possibility. Refrain from words that denote generalization (always, rarely) or indefinite expressions (mostly, in most cases). Observe that correct statements should constitute 50% of the number of correct phrases.
Objective, matching	Lower and medium cognitive levels	Guessing opportunity is limited. Effective in summative assessment.	Include additional choices. Clarify list/column directions. Ensure items in the two columns are homogenous and arranged logically.
Objective, multiple choice	All cognitive levels, but more effective for high levels	Effective in formative assessment because they allow room for discussion.	Answer choices should be of the same length. Specify only one correct answer. Provide reasonable choices for answers. Indicate answer choices with letters. Paragraph stem should indicate a problem with alternative possible solutions. Ensure alternatives are short and avoid redundancy or excessive words which are not related to the problem. Give no signs through linguistic clues that suggest answers. Do not use negative particles at the beginning of the question and, if used, these should be underlined.

Two examples of a complete theoretical test for auto mechanics/light vehicles at the skilled level are shown in Appendix B-3.

3.4 Select suitable assessment methods for the practical skills test (Step 4)

The practical test aims to assess the candidate's skills and attitudes. **No assessment method is intrinsically better than another, so the choice of test must depend on its relevance to the competencies to be assessed.** Nevertheless, the following criteria should be borne in mind:

- **Validity:** The ability to measure what the assessment was originally designed to measure. For example, test activities should relate directly to the duties and tasks in the national occupational standards for the occupation/job on which the applicant will be tested.

- **Reliability:** The degree to which circumstances beyond the test standard environment will not affect the test results. For example, clear instructions need to be available for the assessors to ensure consistent decision making over time and with different students.

- **Objectivity:** The same results are provided by different assessors. Preparing modal answers to theoretical tests, or identifying clear performance criteria for practical test performance elements, can help to ensure objectivity.

- **Authenticity:** The inclusion of work produced by the candidate for assessment. For example, in the portfolio assessment method, the assessor may ask the applicant to perform specific tasks mentioned in the portfolio, under the assessor's direct observation.

- **Accessibility:** Assessment circumstances should provide equal access for all candidates, and ensure that reasonable adjustments for candidates with disabilities are made. However, this should not affect the reliability of the assessment.

- **Effectiveness:** Avoiding redundancy between various test parts and unnecessary long assessment periods. For example, the skills related to changing vehicle oils could be clustered under one activity.

- **Cost-efficiency:** Adopting assessment evidence and procedures which are cost efficient. For example, using simulators that are less costly than real equipment.

- **Currency:** The assessment of knowledge, skills, and attitudes that are relevant to the current labour market. For example, testing on carburettor systems where the car market has shifted to injection systems would not be considered current.

- **Sufficiency:** The availability of sufficient assessment evidence for taking a decision regarding the competency of the candidate. For example, using an interview assessment method in addition to an observation method to test the applicant's soft skills such as self-confidence, analytical skills, etc.

The following table compares some assessment methods to help in the selection process.

Table 3-3 Comparison among some assessment methods

| Assessment method	Limitations	Strengths
Process assessment	▪ Requires longer time to design and implement; ▪ Depends on assessor's analysis, and consequently requires much experience to maintain objectivity.	▪ More accurate gauge of fields of skills/competencies; ▪ Enables identification of where a performance error occurred.
Product assessment	▪ It is not possible to identify where errors in the product or service occurred.	▪ Easier assessment design and implementation; ▪ More reliable as standard tests may be

		applied on the product/outcome.
Project assessment	▪ Difficult to assess individual contributions in a collective project; ▪ Some tasks may be implemented without direct observation by the assessor.	▪ More comprehensive than other methods; ▪ Useful in bringing together a wide range of skills and knowledge, enabling combined assessment.
Simulation assessment[7]	▪ It is difficult to create a simulation environment that resembles the real work environment.	▪ Permits the assessment in an environment similar to the real work environment when not available; ▪ Less costly, especially when the assessment requires an expensive environment (like cheaper simulator instead of expensive equipment).
Interview assessment	▪ Lacks comprehensiveness due to the small number of questions asked of candidate; ▪ Depends on assessor's self-estimation, possibly lacking reliability and objectivity; ▪ Fear of the situation may influence the candidate's performance (fear, shyness or confusion).	▪ Useful for situations, skills and knowledge in which no other test is valid except through verbal expression; ▪ Assessment of candidate's linguistic, logical, analytic, and interactive capabilities; ▪ Usually as a supporting strategy for assessment through performance observation, or to ensure written test validity.
Portfolio	▪ Needs setting observation standards and mechanisms that ensure assessment quality.	▪ Effective as an alternative method for skills tests; ▪ Effective means to control and assure training quality.

Methods of Distance Assessment

When conducting skills tests for applicants who cannot reach assessment centres, it is possible to either use a certified third party to conduct direct observation or written tests, or interview the candidate on the telephone or through video calls. Samples of the applicants' work or products, and mobile assessment units may also be used.

Selecting the most suitable assessment method is strongly linked with the availability of an effective quality assurance mechanism regarding assessment design and implementation. When quality assurance is strong across the entire training system, the performance portfolio is the most suitable assessment method because the evidence produced can be trusted. Indeed, the portfolio assessment method requires established monitoring procedures (part of a quality assurance system) because this method relies strongly on other testing methods. For instance, when a portfolio assessment method is selected only then we can be sure that marks obtained through written tests are objective, and reflect the candidate's capacity.

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[7] Before making a decision to use simulation, the test developer should weigh up the benefits and limitations of using such an approach in consultation with industry, and consider the available workplace opportunities that could spare the costs of a simulation setting, and see how simulation can be combined with other forms of assessment methods (e.g. interview and portfolios).
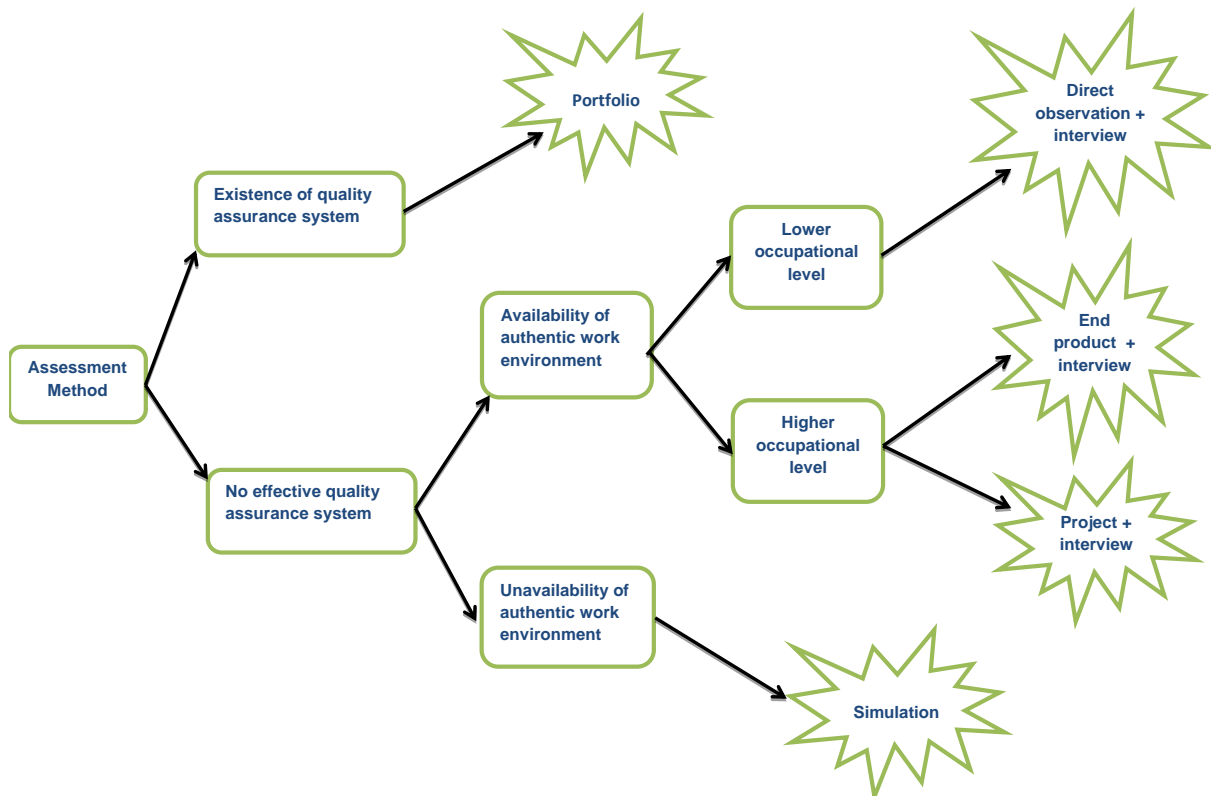
Figure 3-1 Tree diagram for choosing an assessment method for practical tests

Choosing appropriate assessment methods according to qualifications and occupational levels

In **Barbados** [3] there are five levels of competence in the National Vocational Qualifications (NVQs), a qualification framework introduced in the United Kingdom and now are recognized worldwide. These levels are: (1) entry level; (2) skilled occupations; (3) technician and supervisory occupations; (4) technical specialist and middle management occupations; and (5) chartered, professional and senior management occupations.

Assessment methods vary with competence level. For NVQs at levels 1 and 2, it will often be possible to assess candidates on the basis of direct observation of performance at work. It may sometimes be necessary to supplement this with observation of performance in areas that are not part of candidates' normal work. This might involve organizing a secondment to another department, or setting the candidate special tasks.

For NVQs at levels 3, 4 and 5, where more complex performance is required, direct observation of performance in the workplace will probably offer only partial evidence of competence. At these levels, simulations, role play and other methods will probably need to be used, as well as secondments and setting special tasks.

In Germany [4], the skills to be examined are laid down in the training regulations. Depending on the occupation, they may provide for a test of practical and/or theoretical skills. The practical examination will call for samples of work and/or products made during the test. The theoretical test is conducted as a written and/or oral examination.

3.5 Build an evidence matrix (Step 5)

After choosing an assessment method, it is useful to prepare an assessment evidence matrix to ensure that all competencies will be assessed (to confirm the validity and sufficiency of assessment evidence). It also helps in identifying suitable assessment methods to be used in the test, and enables the clustering of similar skills/learning outcomes so that tests can be conducted together. Strong involvement by qualified practitioners from the private sector is needed to identify skills that can be clustered and assessed together with the appropriate assessment methods.

The evidence matrix consists of, at least, duties and tasks/competencies and assessment methods (for a moderate evidence matrix) and of the actions the candidate is required to implement under each method (for a detailed evidence matrix).

The following is an example for part of a detailed evidence matrix for the diagnosis and repair of a fuel system:

Table 3-4 Example of assessment evidence matrix format

Duties &Tasks	Actions required by test applicant for each assessment method**		
	Direct observation	Interview	End product
Duty: Diagnose and repair of fuel system **Tasks**	Test applicant is required to conduct one or more of the following activities:		
• Diagnosing fuel system failures, defining causes and repairing.	Tuning engine by using the analyser.	Applicant is asked to mention the most common reasons behind the engine's failure to start on cold conditions.	**Test applicant is given a car engine that needs carburettor cleaning and tuning, and applicant is assessed on the basis of stabilization of engine operation after cleaning and tuning by using the exhaust analyser.**
• Dissembling fuel tank from vehicle, defining failure and reassembling it; • Checking fuel pipes and carrying out necessary repairs.	Disassemble fuel tank and check dents and leaking and reassemble		
• Checking pressure and emptying of fuel pump; • Removing fuel pump (mechanical, electrical) from engine and reinstalling.	Check electrical/mechanical fuel pump by using special apparatus.		
• Removing carburettor from engine and reinstalling; • Dissembling carburettor into parts and reassembling; • Conducting maintenance for carburettor; • Dissembling air and fuel filters, cleaning and reinstalling.	Dissemble carburettor and carry out necessary maintenance and reassemble it.	Applicant is asked to mention the main circuits inside the carburettor.	

Note: **Other assessment methods could also be added to the matrix (simulation, project, etc.).

The following table compares the relative merits of moderate and detailed evidence matrices [1]:

Table 3-5 Comparison between types of assessment evidence matrices

Type of assessment evidence matrix	Matrix Elements	Strengths	Limitations
Moderate evidence matrix	Tasks or competencies; Assessment methods.	Simple and quick to prepare; Useful for justifying the selection of the assessment method; Shows the sufficiency of	Does not give proof of sufficiency of actions required to be implemented for all tasks or competencies.

		assessment methods; Reduces evidence repetition.	
Detailed evidence matrix	Tasks or competencies; Assessment methods; Actions/activities required to be conducted for every assessment method.	Provides strong evidence of assessment content validity; Important for critical and dangerous tasks.	Takes a longer time to put in place (but becomes easier with practice).

3.6 Design assessment tools for practical tests (Step 6)

Assessment tools allow assessors to collect evidence and document performance of candidates during and after the assessment. They need to be developed in consultation with industry and skilled workers and tested on a sample of candidates. One assessment method or more can be used in the practical test based on the actions and activities required of the candidate.

Assessment tools can take the shape of checklists, rating scales or any other qualitative or quantitative tool. Checklists include a list of actions or activities that assessors are required to assess. Usually items are answered by one of two choices, such as qualified or unqualified, competent or not yet competent, achieved or not achieved, etc. Rating scales also include a list of actions to be assessed but allow for giving a numerical or descriptive rating.

Assessment tools vary according to the assessment method(s) that will be used in the test. Whatever the assessment methods, assessment tools should contain at least the following:

- **Generic information** on (a) the occupation related to the test (name, code, occupation level, etc.), (b) the candidate's contact information (name, telephone number, etc.), (c) the test location, date and period, and (d) names of assessors.

- **Instructions** to assessors for setting the testing environment, gathering and interpreting evidence, and to candidates on test preparation, test content and analysis method. Directions to the candidate should be clear, time specific, and show how answers should be presented. Test questions and paragraphs should be arranged in a logical manner and include a model of correct answers.

- **Performance elements.** This includes the skills to be tested, the assessment methods, the main actions/product/service the candidate is required to conduct/produce (in line with the test specification table and evidence matrix), and the rating tool for each of the performance elements (e.g. competent/not competent, rating scales).

- **Performance criteria** describe the level of performance required for the candidate to demonstrate achievement. Performance criteria could be, for instance, an acceptable numerical discrepancy in performance accuracy and related to speed or safety standards applied, or the appearance of the end product, and so on.

- **Oral supportive questions** to the candidate at a certain step of the test, in order to assess their knowledge of elements related to the test. These should not be used alone but in conjunction with other methods, particularly direct observation. Oral supportive questions can mostly relate to:

- justifying and analysing the performance step (e.g. "Why did you install washers before operating the machine?"; "Why should the engine reach normal operating temperature before tuning up?");
- naming the parts and components (e.g. naming cooling circuit components as presented).

- **Resources** required for candidates to carry out the test activities.

- **Scenario (to be added for simulation).** The assessor should outline to the applicant the procedure to follow for carrying out the series of actions, activities and operations required (e.g. "Working in a team, applicants are to demonstrate the safe procedure for cleaning up a small hazardous leakage").

- **Oral/interview questions (to be added to interview method).** These are questions to test a candidate's knowledge of the technical basis of the duties and tasks of the occupation. They differ from oral supportive questions in that they are not related to a demonstrated action. The interview method could be used alone or in conjunction with other methods (like direct observation, product, project, or portfolio) to ensure sufficiency of evidence. Oral interview questions can relate to:
  - clarification questions (for instant when using the portfolio assessment method);
  - procedures and processes (e.g. "What are the main steps in …?");
  - underpinning knowledge (e.g. "How much should …?"; "Why?");
  - further probing questions ("Give an example of an action that could occur in offset printing you think would be inappropriate");
  - contingency questions ("What would you do if you saw that action occurring?").

- **Expected contents of the portfolio (to be added for portfolio assessment method),** with details on the type of evidence required for the candidate to be considered competent.

The assessment tool below is an example of the direct observation assessment method. Appendices B-4 and C-3 in the attached CD include assessment tools for practical tests of two jobs in auto repair, and printing and packaging – using different assessment methods.

Practical Test– Page 1

Sector/occupation: Auto mechanics – light vehicles   **Occupational level**: Skilled

Job name & code: Mechanic – Light vehicles/7231014

Test applicant's name: ……………………………..   **Telephone No. :** …………………….

Test location: ……………… **Allotted time**: one hour

Names of assessors:
……

Date of test: ………………………………….

General instructions:

▪   **To assessors** (for setting the testing environment, gathering and interpreting evidence, etc.)

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……
……
……
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……
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…………………………………………………………………………………………

▪   **To candidate** (to prepare the tests, and be informed on the contents and analysis method, test regulations, etc.)

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…………………………………………………………………………………………

Practical test – Page 2

Duty: Diagnosis and repair of engine cooling system

Action required from test applicant: **Flush engine radiator**

Assessment method: Direct observation   **Allotted time for action**: 30 minutes

Main resources: Hand tools; petrol engine – light vehicle

Performance elements	Mark		Performance criteria
	Received	**Allotted**	
• Coolant liquid is emptied.		10	Radiator cap and drain were opened when engine was cool.
• Regulator is dissembled.		10	Disassembly was done without spoiling the regulator.
• Cooling system is filled with coolant liquid.		10	The hose for supplying coolant liquid and cleaning solution was connected with radiator's lower hose, and the upper hose was placed on a vessel to reverse the flow of coolant liquid.
• Engine is started.		10	General safety standards and work on engines were followed.
• Coolant liquid is emptied from the radiator.		10	Emptying and refilling coolant were done without spoiling hoses or parts of the cooling circuit.
		10	Emptying and refilling were done in a clean and tidy manner.
		10	Completion time was less than 20 minutes.

Supporting oral questions			
Q.1: What is the benefit of using anti-freeze in a vehicle cooling system?		15	
Q.2: Name cooling circuit components.		15	

Assessor's name & signature: …………………………   Result:……../100   Date:………………

It should be emphasised that assessment methods are not mutually exclusive; a skills test could use either one assessment method or another, or could also be a combination of more than one assessment method.

3.7 Finalize the theoretical test and assessment tool(s) for the practical test (Step 7)

Test designers can facilitate the assessors' tasks and increase assessment objectivity by (a) adding model answers to theoretical test questions and practical test supporting questions, (b) defining specific and clear performance criteria for the performance elements in the assessment tools of the practical test, and (c) building the capacities of assessors in collecting and recording assessment evidence.

Questions and performance elements in assessment forms sometimes need to be weighted. In an outcome-based/competency-based assessment, there is no need for weights as the candidate is either competent or not. In other circumstances, the test designer can either split competency units into smaller elements and give each an equal weight, or use the learning outcomes significance of the test specifications table as a basis for a decision. Private sector representatives can also advise on this aspect. CAQA will prepare a coherent methodology for weighting skills tests as part of its mandate. Regardless of the method used for defining weights of assessment components and questions, reliance and trust should be placed in the assessor, their expertise, and their ratings.

The Kingdom of Saudi Arabia's experience

In Saudi Arabia, the occupational analysis table (duties and tasks) is sent for feedback from a large number of practitioners to grade the significance and difficulty of each task and duty. Following statistical analysis of these questionnaires, duties and tasks can be arranged according to significance and learning difficulty. The same method could be used to decide on question weights (for details on this methodology see the Saudi occupational standards on the website of the General Corporation for Technical and Vocational Training.

http://www.tvtc.gov.sa/Arabic/Departments/Departments/cdd1/Pages/default.aspx

> ### The system of rating and marking in technical and vocational training in Jamaica
>
> A numerical rating scale is used in Jamaica [2] for practical and theoretical assessment – from 1 to 5 where (5) represents the highest rate. The trainee should score at least a (3) rating in practical and theoretical assessments of each training module, in order to access the external final test. Supplementary training is available for those who fail.

Assessment procedures, circumstances, tools, and materials must be adapted to ensure that they meet the needs of candidates with disabilities. These accommodations are provided for by the *UN Convention on the Rights of Persons with Disabilities*, ratified by Jordan in 2008. Article 24 states that "States Parties shall ensure that persons with disabilities are able to access general tertiary education, vocational training, adult education and lifelong learning without discrimination and on an equal basis with others. To this end, States Parties shall ensure that reasonable accommodation is provided to persons with disabilities."

These reasonable accommodations, to be discussed with the Jordanian Higher Council for People with Disabilities, should allow for improved access to skills testing of candidates with disabilities. Changes are supposed to be similar to those that companies must introduce for recruiting persons with disabilities. For example, providing access to the testing centre for wheelchairs, using alternative audio/written languages, altering the pace of the tests or height of the tables, and adapting preparation time to address the specific needs of candidates. It is not a question of "preferential treatment" but of reasonable accommodation to ensure the inclusiveness of the tests.

Additional efforts can be made to improve the inclusiveness of the testing process. In some areas of Jordan, women may find it more comfortable to be tested separately by female assessors. Skills training should be an opportunity for a less segmented/more inclusive labour market. However, priority should be given to greater outreach of the tests, and in some specific contexts requests for separate testing should be taken into account. Testing could also be provided by mobile training units or any methods of distance assessment for inhabitants from remote areas; otherwise transport costs could be covered. Languages can be adapted, in line with current labour practices. Care should be taken that test material does not contain anything that candidates with specific social and cultural backgrounds could find shocking. The test design should also be adapted for illiterate persons (e.g. by using graphs and videos instead of written questions).

> ### Adapting tests to candidates' needs in Saudi Arabia
>
> Many foreign candidates for low level occupational tests in Saudi Arabia [16] are not able to read questions in Arabic. Images, videos and computerized voice messages have been added. Occupational standards for a number of occupations, publications of the *General Administration for Skill Test*, and skills test questions have also been translated in English, Hindi, Urdu, and Bengali. Test mechanisms have also been developed to be conducted electronically. These changes reflect existing workplace practices in Saudi Arabia, where instructions are often given in foreign languages.

Skills tests around the world

Germany [19]

Under a dual system, tests are conducted in vocational training schools by governmental authorities, whereas tests in workplaces are the responsibility of chambers of commerce, which organize and supervise final tests. Every trainee sits for a semi-test (i.e. in the middle of the training period) to assess progress. At the end of the training period, the trainee sits for a final test to qualify.

Jamaica [2]

Applicants are tested in three instances:

- internal assessment (inside the training institute), where trainees are assessed during the training programme through theoretical and practical performance tests;

- practical assessment, where theoretical and practical skill assessment is monitored by external assessors who visit the training institute to ensure that testing procedures are valid and fair;

- external written assessment, which is directly implemented by the National Council for Technical and Vocational Education & Training. This is conducted at the end of a group of training modules and divided into two multiple-choice sections. The first paper tests the main skills and general technical knowledge (10-20 questions for each module); the second paper tests supporting subjects (10-15 questions on mathematics and 10-20 questions on language and communication).

The Kingdom of Saudi Arabia [16]

Multiple-choice written tests are the main method of skills testing in Saudi Arabia. These tests assess applicants' basic knowledge of their occupation, their practical skills, and work environment skills (behaviours, safety measures, etc.). The weighting given to each test item varies according to the significance of the related

Before its final adoption, the draft test should be piloted on a sample of the target group (graduates of vocational training programs or workers). Pre-test results are then analysed for the purpose of defining areas of strength and weaknesses, and amending the draft test in order to improve its validity before adoption by CAQA.

Summary

Skills tests measure the candidate's capability to perform duties according to specific occupational standards. Skills tests consist of two parts: theoretical and practical. The theoretical part may be comprised of essay-style, true or false, or multiple-choice questions. The practical test, on the other hand, aims to assess practical skills and attitudes and consists of performance elements, supporting oral questions, and performance criteria.

The process of skills test design consists of seven steps starting from (1) identification of duties, tasks and learning outcomes; (2) designing the test specifications table; (3) designing the theoretical test; (4) selecting suitable assessment methods; (5) building the evidence matrix; (6) designing the practical test assessment tools; and (7) finalizing the theoretical test and assessment tools. All of these steps require strong involvement of qualified practitioners from industry and the private sector.

Test designers can facilitate the assessment process and help maintain the assessor's objectivity by developing model answers, identifying clear performance criteria, and building the capacities of assessors in collecting and recording assessment evidence.

A coherent methodology for weighting test items is required. Regardless of the method used, however, the assessor's expertise and evaluation should be entrusted and relied upon.

Assessment procedures, circumstances, tools, and materials must be adapted to ensure they meet the needs of candidates with disabilities and allow for improved access to skills testing. Additional efforts can be made to improve the inclusiveness of the testing process and ensure a greater outreach of skills testing, particularly for women, Illiterate persons, and candidates from remote areas.

Before its final adoption, draft tests should be piloted on a sample of the target group. Pilot test results should be analysed to identify strengths and weaknesses, and the draft test amended in order to improve its validity before final approval.

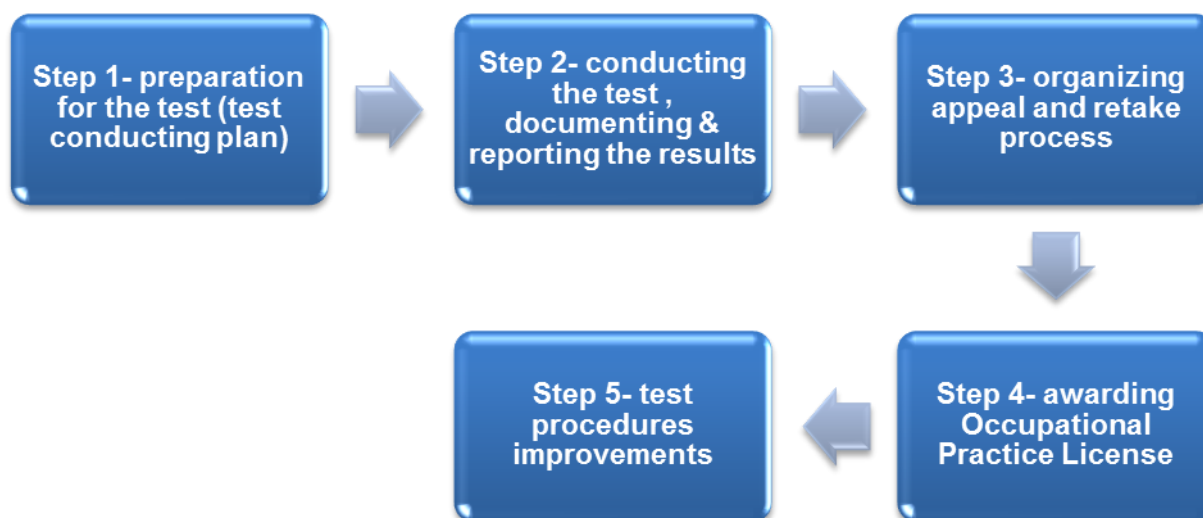# 4. Conducting skills tests

The involvement of all concerned parties in designing and implementing skills tests, particularly employers, will improve the quality of skills test implementation procedures, enhance society's recognition of assessment and occupational certificates, and provide support to testing organizations, assessment improvement, and ensure transparency of the assessment process.

The process of conducting skills tests is characterized by five steps (described below), leading to a decision of awarding an occupational license:

4.1 Selection of supervision committees, assessors, and test locations

As per CAQA regulations for conducting skills tests, the CAQA Director or their deputy will form a supervision committee of no less than two members based on lists of public and private sector specialists and their CVs relevant to the specific skills areas.

In line with these regulations, the committee's main duties are:

- checking the official identification document (ID) of the candidates;
- supervising the theoretical test, and marking it;
- implementing the practical test with no less than two relevant specialists;
- documenting skills test results on the candidate's application and sending it to CAQA.

Assessors will be selected with certain criteria. They will have no less than five consecutive years of recent experience in the field of specialisation and have a practice license for an occupational level of at least the same as the test. They should demonstrate core work skills (Arabic language, computer skills, etc.). They should be physically capable and ready to implement the test. They should also attend a CAQA training course on conducting skills tests.

Test locations will be selected with the following criteria:

- easy access for all (including for candidates with disabilities);
- availability of public facilities, rest areas, car parking, secure room for the committee, and so on;
- testing locations should also provide a safe and comfortable environment for the candidates (in terms of luminosity, noise, heat);

- sufficient space and adequate furniture, suitable teaching aids (blackboard, etc.), and qualified administrative support should be available for the theoretical tests;

- for practical tests, technical facilities specified in the test documents should be made available;

- testing places and their equipment should be licensed by CAQA. Special care should be exercised with regard to occupational health and safety standards.[8]

Role of assessors in Jamaica

In Jamaica [2], external assessors monitor practical assessments. They visit training institutes to ensure that internal assessments are valid and fair. They also review trainees' profiles to ensure that they have been prepared properly. The external written assessment is implemented directly by the National Council for Technical and Vocational Education and Training.

The German Federal Institute for Vocational Education and Training (BIBB) provides assistance to assessors through a website called "Assessor's Portal" (http://www.prueferportal.org/html/459.php). This site presents several topics related to test preparation, management, and implementation.

4.2 Preparing for the test implementation (Step 1)

Several preparatory steps are needed before conducting skills tests, to be documented in a simple skills test implementation plan prepared by CAQA, based on the assessment tools (in collaboration with test designers), and shared with all candidates prior to the test.

It should include:

- the general test rules and specific instructions (e.g. for the end product, how the candidate should prepare for the project/product – including readings and references – and, for the portfolio, how it should be put together and what information to include);

- the duties and tasks on whose basis the test will be conducted (i.e. what will be tested);

- the time, place, and circumstances of the test (when, where and the context of the test);

- the methods of assessment and tools which will be used in the test (e.g. how the test will be implemented, and the fact that an assessor will be observing the process);

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[8] ILO-CAQA training workshop for skills test assessors, 2-3 October 2013, Amman.

- the criteria for deciding which candidates are competent;
- the list of assessors and members of the supervision committee;
- the confirmation that materials and tools required will be available;
- the confirmation that adjustments can be made for candidates with disabilities (in terms of access to test location, test language, communication with the candidate), and the procedure for candidates with disabilities to request reasonable accommodation;
- procedures for test retake and appeals, as well as any other legal issue.

When preparing for a skills test, CAQA, the supervision committee, and the assessors should use the checklist below:

☐ The candidate has filled out the test application form.

☐ The information stated in the test documents is accurate and in line with the Arab Standard Classification for Occupations and/or the Jordanian Occupational Classifications.

☐ Equipment and tools required for the test are available before the start of the test and the environment reflects conditions of a real workplace (especially for a simulation test).

☐ Candidates have been notified of the test, and the skills test implementation plan was shared with them in advance.

☐ Test tools have been pre-tested with a sample of candidates to ensure their

- o validity;
- o reliability;
- o objectivity;
- o authenticity;
- o efficiency;
- o cost effectiveness;
- o currency.

☐ Test procedures have been checked by technically relevant people in industry or in the TVET system.

☐ Candidates with disabilities have been identified and reasonable accommodation has been included in the test design and implemented.

☐ Appropriate administrative staff have been assigned to the test.

4.3 Conducting the test (Step 2)

The test should be conducted according to the plan and evidence should be collected with agreed tools. If well prepared, test implementation should not meet major challenges. The performance of the candidate could be videotaped for learning purposes. Prior to the test, candidates should also be reminded about the possibility of making an appeal against assessment decisions and retaking the test.

The evidence should be assessed in accordance with agreed standards, and results reported accordingly. In Jordan, testing is not competency-based; a candidate is considered successful if they score 60 per cent in the theoretical and 70 per cent in the practical parts.

Tests results are kept confidential, but employers can access, through CAQA, the list of candidates who were awarded an occupational license. Hard copies of skills test results are

kept by CAQA for five years (after which an internal committee should be established to destroy them). CAQA recently developed, with ILO support, an electronic system for skills tests and occupational licences. The system will keep records and history for all tests implemented and all licences awarded.

4.4 Organizing retake (reassessment) and appeal (Step 3)

Skills tests may be reassessed under certain conditions.
According to CAQA regulations, in the event of a candidate failing the theoretical part of the skills test, they are entitled to retake the test within one year, commencing one month from the date of the original test. A nominal additional fee of five Jordanian dinars (USD 7.06) will be paid. For the practical part of the test, the same conditions apply, but the candidate has to bear the full cost of each practical test as stipulated in CAQA bylaw.

Documents (e.g. medical certificates) releasing the candidate from testing should be confirmed by the CAQA Director, and the test should be retaken within a six-month period from the original test appointment.

For candidates wishing to appeal against the skills test result, the candidate may appeal to the CAQA Director in writing within one week after being notified of the result, after paying a fee of one Jordanian dinar (USD 1.4). The CAQA Director or their duly appointed representative will establish a specialized technical committee of no less than two members in order to review the test results. The committee shall either endorse the original test result or modify it, and submit their decision to the CAQA Director for approval.

4.5 Awarding the occupational practice license (Step 4)

Article (7) of CAQA regulations on conducting skills tests and awarding occupational licenses defines certain requirements and conditions that should be fulfilled for awarding such licenses in one of three levels:

(1) Craftsperson level:

- **1st Class Craftsperson.** An occupational practice license in this class is granted to whoever fulfils any of the following:
  - the successful completion of an accredited 1st Class Craftsperson training programme;
  - one year of work experience practising the profession after obtaining an occupational license for 2nd Class Craftsperson and passing the skills test successfully. The candidate should submit to CAQA a statement of work experience, issued by an employer, and endorsed by the Ministry of Labour or any of its offices in the governorates;
  - successful completion of a skill upgrading programme from 2nd Class Craftsperson to 1st Class Craftsperson level, and passing the skills test successfully.
- **2nd Class Craftsperson**. An occupational license in this class is granted to whoever fulfils any of the following:
  - successful completion of the requirements under an accredited 2nd Class Craftsperson programme;
  - five years of work experience practising the profession, with good literacy and numeracy skills (for candidates older than 21 years), in addition to passing the skills test successfully;
  - three years of work experience practicing the profession, completion of an accredited vocational programme for skilled workers, and passing the skills test successfully;

- two years of work experience practicing the profession after obtaining an occupational license at the skilled trade level and passing the skills test successfully.

(2) Skilled level. An occupational license at this level is granted to whoever fulfils any of the following:
- successful completion of an accredited vocational programme at the skilled level;
- obtaining the General Secondary Certificate (Tawjihi) – Vocational Stream for the labour market;
- two years of work experience in practicing the occupation (for candidates older than eighteen years of age), in addition to passing the skills test successfully;
- one year of work experience of practicing the profession, completion of an accredited vocational programme at semi-skilled level, and passing the skills test successfully.

(3) Semi-skilled level. An occupational license at this level is granted to whoever fulfils any of the following:
- successful completion of an accredited vocational programme for semi- skilled level;
- one year of work experience practicing the occupation and passing the skills test successfully.

Awarding occupational certificates from around the world

The National Vocational Qualifications (NVQ) in **England, Wales, Northern Ireland** and other Commonwealth countries, such as **Jamaica** [2], awards graduates a "competency certificate" upon their successful completion of all test components, according to the accredited occupational level under the system.

Similar to the NVQ, in **Scotland** [6] competency certificates are awarded under the Scottish Vocational Qualifications (SVQs). Also, trainees can obtain a competency certificate in "Workplace Core Skills", which covers a wide range of competencies, including communication, numeracy, ICT, problem-solving, and teamwork. These are considered to ease adaptation to change in the labour market, as well as in life. These five core skills are included among 20 training units classified into four levels. Tests can focus on the full range of competencies or on some elements of it.

In **Saudi Arabia**, occupational certificates are awarded by training providers – mainly technical colleges, industrial institutes, public vocational training institutes and technical training providers from the private sector. Workers must pass a written "occupational test", which qualifies them to enter the labour market. In April 2013 the Technical and Vocational Training Corporation (TVTC) established the "Saudi Skills Standards" company as the responsible body for 270 occupational standards in the Saudi labour market (TVTC*, Annual Report 2013*).

In **Germany** [19], after passing a skills test, trainees are awarded a certificate by the relevant chamber of commerce, which is linked to a wage scale.

In the **Philippines** [18], after passing the relevant skills test, workers are awarded a National Certificate (NC) at the appropriate qualification level (among four different levels). A Certificate of Competency (COC) can also be awarded as an acknowledgment of the worker's specific competencies, even if they have not passed the national level qualification (http://www.tesda.gov.ph).

4.6 Test procedures review and improvement (Step 5)

General feedback, design flaws, and positive and negative practices should be gathered by assessors from test candidates, assessors, and supervision committees and analysed by CAQA with the form presented below. CAQA is then responsible to amend the test design and procedures accordingly.

Feedback from users (graduates and those who failed)	→	Added to assessors' feedback	→	Shared with CAQA Director	→	To change the test design and procedures, and update revised test in database

		Test review and improvement form

To the test candidates –

Please report on the suitability of the test in the form below after finishing the test's theoretical and practical parts, so that it can be improved for subsequent batches.

First: Theoretical test

No	Yes	**1. Test questions are clear and can be understood easily**
No	Yes	**2. Test questions cover theoretical information related to the occupation**
No	Yes	**3. There are questions that have nothing to do with the occupation**

If the answer is Yes, please specify …………………………………………………..

No	Yes	**4. Some questions have more than one correct answer**

If Yes, please specify …………………………………………………..

No	Yes	**5. The time allotted to the test is sufficient**
No	Yes	**6. Test halls are suitable in terms of seats, ventilation and lighting**

Second: Practical test

No	Yes	**1. Test questions are clear in terms of language and phrasing**
No	Yes	**2. The test reflects the technical capability of the person in performing the job**

3. The place of test implementation is suitable in terms of the availability of:

No	Yes	**Facilities**
No	Yes	**Equipment**
No	Yes	**Tools**
No	Yes	**4. Test supervisor (assessor) was cooperative in clarifying the required duties in the test**
No	Yes	**5. The time allotted to the test was sufficient**

Thank you for your cooperation

Summary

Skills testing passes through several consecutive steps, including: preparation and setting of the test conduction plan; test implementation; documenting and reporting test results; possible appeal and test retake processes; awarding occupational practice licenses; and reviewing and improving test procedures.

The involvement of all stakeholders in the design and implementation of skills tests, particularly employers, seems to be a pressing issue for improving the quality of skills testing procedures. Greater involvement could help to enhance society's recognition of assessment and occupational certificates, support testing organizations, and ensure transparency of assessment processes.

Conclusion and next steps

More remains to be done at the policy level to improve skills testing and certification in Jordan. Based on consultations, the following areas were identified as requiring improvement:

- **Finalizing a functioning framework for skills tests in Jordan:**
  - A policy decision needs to be made to set (a) the selection criteria for test developers, assessors and test centres, (b) the mechanisms for their accreditation, and (c) the financial framework for their remuneration.
  - A pool of accredited test designers and assessors (from TVET providers and industry) needs to be established to work with CAQA.
  - A bank for skills tests needs to be developed, including written tests and assessment tools for practical tests.
  - Activating social dialogue mechanisms at the sector level to link occupational licenses with definite wage scales, in order to improve the predictability of working conditions, increase attractiveness for these jobs levels, and contribute to greater levels of decent work.

- **Improving the quality and efficiency of skills tests:**
  - Procedures and processes for designing and administering skills tests need to be improved.
  - A policy decision needs to be made for a shift to competency-based assessment. In the meantime, there is a need to define clear mechanisms for weighting marks in skills tests.
  - Written tests are currently the main assessment method of candidates' performance. Other assessment methods need to be added to better reflect the kind of performance required within the labour market.
  - Systematizing skills-tracking mechanisms as part of apprenticeships and on-the-job training programmes will improve trust between employers and training centres and better prepare apprentices for obtaining occupational licenses.

- **Increasing access to skills testing:**
  - Workers, especially those in the informal economy, need to be given greater recognition of prior learning. A specific policy needs to be designed toward this end.
  - Much work is also required to support the adaptation of skills tests for persons with disabilities.
  - Mobile skills-testing stations and other distance assessment methods need to be set up to increase outreach in remote areas.
  - The application of the skills testing framework needs to extend to migrant/foreign workers in a way that supports their access to decent jobs, as well as the overall policy of nationalization of the labour force.

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Glossary

Apprenticeship: A system by which a learner (apprentice) acquires skills for a trade or craft (training content) in an enterprise, learning and working side by side an experienced craftsperson, complemented by classroom-based instruction (training process). The apprentice, master craftsperson, employer and the training provider conclude a training agreement (training contract) regulated by formal laws and acts. Costs of training maybe shared between apprentice, master craftsperson/employer or the government[9].

Assessment: A general term that includes all procedures used for obtaining information to issue a judgment related to the learner's competencies.

Assessment evidence: Information collected about the candidate during the assessment process and then compared with pre-set standards to give evidence on the candidate's competency.

Assessment tools: These are flexible tools that serve the assessment objective and are completed by examiners or assessors during or after the assessment. The most important of these tools are checklists and rating scales.

Content validity: The extent to which test content is in line with training contents (through textbook analysis, for instance).

DACUM (developing a curriculum): An accredited process of structured dialogue with employers to develop competency-based curricula. See http://www.dacum.org/index.asp

Evaluation: The analysis and interpretation of results to (a) define the extent of learners' development towards learning objectives, and (b) recommend changes in the training programme.

Evidence matrix: A matrix that connects competencies to (a) actions required from the candidate during the assessment process, and (b) the assessment methods selected. It aims to ensure content validity and sufficiency.

Formative assessment: An ongoing assessment for the purpose of measuring what the trainee or learner has learned and identifying shortcomings for future improvements.

Informal economy: All economic activities by workers and economic units that are, in law or in practice, not covered (or insufficiently covered) by formal arrangements.[10]

Measurement: Collecting information during assessment by using assessment strategies (methods), including assessors' numerical evaluations of performance.

Occupational practice license: A document awarded to a graduate to permit them to legally practise a profession[11].

Occupational test (skills test): A tool to measure a candidate's knowledge and skills at the time of the test. It consists of two parts: a theoretical test to assess the person's theoretical knowledge, and a practical test to assess a person's practical skills and attitudes[11].

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[9] Resource guide on upgrading informal apprenticeship, ILO, 2012
http://ilo.org/skills/projects/WCMS_158771/lang--en/index.htm

[10] Statistics of work, employment and labour underutilization – Report II, 19th International Conference of Labour Statisticians, ILO, 2013 .
http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_220535.pdf

[11] according to CAQA regulations for conducting skills tests in Jordan.

Oral test: A test in which the candidate is required to respond verbally to questions, in their own words. An oral test helps the assessor evaluate skills that cannot be measured by a written test, such as the person's ability to express themselves.

Performance criteria: The expected level of a candidate's performance in a test that will allow assessors to produce an evaluation on the candidate's competency.

Performance test (authentic assessment): A test that requires candidates to demonstrate their practical skills.

Simulation: Testing held in a context that is similar to a workplace for a specific occupation.

Summative assessment: An assessment that measures the knowledge and skills that the learner has acquired, held at the end of a training period (compared with a formative assessment conducted during or throughout a training period).

Test: A set of agreed methods used to establish the competency of a candidate.

Written test (pen and paper): A traditional assessment method where candidates provide written answers.