



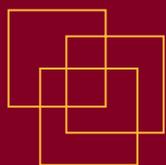
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# Assessing skills in the informal economy:

A resource guide for  
small industry and  
community organizations





# **Assessing skills in the informal economy:**

A resource guide for small industry  
and community organizations

Ralf Lange and Maria Baier-D'Orazio, FAKT – Consult  
With contributions by Dieter Hermanns

**International Labour Organization (ILO)**

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## Foreword

Learning and working in the informal economy remains a reality for millions of women and men around the world. Safeguarding and improving the quality of training, of products and of services can greatly contribute to higher productivity, development of local markets, better working conditions and career prospects, transition to the formal economy, consumer protection, and social cohesion in communities. Local actors spearheading initiatives to assess skills of workers in the informal economy are small industry and community organizations (SICOs) such as: trade associations, trade unions representing workers from the informal economy, workers' cooperatives, or community organizations supporting workers in the informal economy. This resource guide is designed to assist them in improving existing skills assessment practices, and to encourage others to consider offering this service to their members.

The resource guide is based on nine case studies from Africa, Asia and Latin America and demonstrates that bottom-up skills assessments are feasible and yield multiple benefits, yet need to be managed well to be effective. A common feature across the cases is that processes are initiated by SICOs themselves, and therefore standards are designed, agreed upon and enforced by local labour market actors. These case studies are available on the Global Public-Private Knowledge Sharing Platform on Skills for Employment at [www.skillsforemployment.org](http://www.skillsforemployment.org).

Assessments, first and foremost, need to be trusted, reliable and transparent, which requires that a number of basic rules for the process and compilation of tests are observed. Good practices as captured in this guide include partnerships between the SICOs and other stakeholders and institutions, be it local training providers, or the local government. In some cases, SICOs aim for compatibility with the national training system in order to achieve full recognition of their practices and certificates, which would represent a huge step towards formality.

The guide is designed to inspire its users. At the same time, it strikes a delicate balance between what is feasible given the generally low financial and personal resources available in SICOs, and what is required to ensure a quality assessment process. The main authors, Ralf Lange and Maria Baier-D'Orazio of FAKT Consult, Stuttgart, Germany, have skillfully compiled and analyzed the existing assessment practices of SICOs aimed at apprentices, workers and master craftspersons, and draw important lessons from them. Dieter Hermanns' contribution focuses on methodological additions to the assessment design. This section provides examples and technical details on how assessment panel members can improve their assessment practices and ensure a valid and unambiguous assessment.

This guide is part of a series of ILO publications on skills and upgrading apprenticeship in the informal economy. A draft version of the resource guide was validated at the *Regional experts' knowledge sharing workshop on upgrading informal apprenticeship* in April 2013 in Johannesburg, South Africa. It was produced under the overall supervision of Christine Hofmann in the Skills and Employability Branch, and benefited from substantive comments by Michael Axmann and Paul Comyn, ILO Skills Development Specialists, as well as by Markus Pilgrim and Merten Sievers, ILO Small Enterprise Development. Jane Auvré and Irene Brown were instrumental in proofreading and publishing the document.

*Christine Evans-Klock*  
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## List of abbreviations

<b>ANMACO</b>	Association of Navigators on Lake Kivu (DRC)
<b>APSKI</b>	Association of Plumbers of South Kivu (DRC)
<b>BRAC</b>	formerly Bangladesh Rural Advancement Committee
<b>CAPA</b>	Training centre in Democratic Republic of Congo
<b>CENAB</b>	National Federation of Craftspeople (Benin)
<b>COTRAF</b>	Rwandan trade union
<b>COV</b>	Corporación Oro Verde
<b>DACUM</b>	Synonyme for « Develop A Curriculum »
<b>DRC</b>	Democratic Republic of the Congo
<b>EFAT</b>	End of traditional apprenticeship assessment (French: Examen de fin d'apprentissage traditionnel); established by local business associations in Benin and supervised by a national trade association
<b>FCFA</b>	Franc des Communautés Financières d'Afrique (currency of Benin)
<b>GHABA</b>	Ghana Hairdressers and Beauticians Association
<b>GIPA</b>	Groupement Interprofessionnel des Artisans (Intersectoral Craftworkers Association) (Cameroon)
<b>ILO</b>	International Labour Organization
<b>MC</b>	Mastercraftsperson
<b>NABH</b>	National Association of Beauticians and Hairdressers (Ghana)
<b>NGO</b>	Non-Governmental Organization
<b>NVTI</b>	National Vocational Training Institute (Ghana)
<b>SBA</b>	Small business administration
<b>SICO</b>	Small Industry and Community Organization
<b>SME</b>	Small and medium-sized enterprise
<b>TTI</b>	Technical Training Institution
<b>TVET</b>	Technical and Vocational Education and Training

## Who this guide is for

This guide is a resource for people working in and with small industry and community organizations. It addresses practitioners, industry and skills experts tasked to establish skills assessments as a service for the organization's members. Since assessments need to respond to local realities, workers and employers in the informal economy are the main actors to ensure that assessments are relevant.

The term “Small industry and community organizations” as used in this guide includes the following types of organizations, all of which organize and represent the interests of women and men working in the informal economy:

- Single trade associations, both at local and national level
- National or regional multi-trade federations (as long as membership is also drawn from the informal economy)
- Trade unions representing workers from the informal economy
- Workers' cooperatives
- Community organizations supporting small businesses operating in the informal economy

The guide builds on case studies and experience from Africa, Latin America and Asia and thus addresses readers from all regions.

## Glossary of key terms

This section describes the common terminology used in this guide

<b>Apprentice</b>	“A person being trained by a master craftsperson under an apprenticeship agreement” <sup>1</sup>
<b>Assessment criteria</b>	<p>In the context of this guide, the term “assessment criteria” refers to those criteria (read: standards, norms or measures) that reflect competent workplace performance assessment.</p> <p>For instance, assessment criteria would determine concretely what is considered a quality product produced by an apprentice.</p>
<b>Informal apprenticeship</b>	“Informal apprenticeship refers to the system by which a young learner (the apprentice) acquires the skills for a trade or craft in a micro- or small enterprise learning and working side by side with an experienced craftsperson. Apprentice and master craftsperson conclude a training agreement that is embedded in local norms and traditions of a society. Costs of training are shared between apprentice and master craftsperson, providing access to training even for poor young people.” <sup>2</sup>
<b>Master craftsperson</b>	“Highly skilled workers who can work independently without guidance. They are often the owner of the enterprise. Responsible for training of apprentices.” <sup>3</sup>
<b>Skills assessment</b>	Skills assessment describes the systematic way of assessing a person’s technical skills, the general knowledge of the trade and other relevant skills required to perform a defined job or occupation. Assessment is conducted by independent assessors (e.g. selected master craftspersons) or by an appointed or elected assessment panel. The assessors use defined assessment criteria; the candidate has to produce evidence of competence from different assessment tasks.
<b>Assessment tool</b>	Within this guide the term “assessment tool” refers to the specific assessment instrument used to collect evidence of competent performance. In the context addressed by this guide, assessment tools are most commonly one or more practical and problem based exercises and simulations.
<b>Occupational profile</b>	An occupational profile summarizes the key concepts that are essential to the overall performance in a given occupation. It entails specific details concerning the responsibilities, tasks and knowledge and skills required.

1. Aggarwal, Ashwani Hofmann, Christine Phiri, Alexander, 2010, p. xii.
2. International Labour Organization, 2012a, p. III.
3. Aggarwal et al., 2010, p. xii.

## Introduction

Skill assessments run by small industry and community organizations (SICOs) have the potential to bring a number of advantages to all parties involved with small business: the master craftspersons themselves, the apprentices, the customers and the market as a whole. Through skills assessment, the quality of products and services can be enhanced and work safety can be improved. SICOs can also strengthen the position of their members in the market. In addition, the informal apprenticeship, long considered inferior by policy makers while at the same time being one of the most common methods of skills acquisition, can be upgraded as a whole. Master-craftspersons, workers and apprentices that have undergone assessments, can gain recognition and consequently may attract more customers and eventually may access better (labour) market opportunities.

As far as the constraints and strategies for promoting skills assessment are concerned, it is advisable to clearly distinguish between two target groups: (1) apprentices and (2) master craftsmen/craftswomen and workers. Experiences show that introducing skills assessment for apprentices in existing strong apprenticeship systems (like in West Africa, for instance) can be a relatively smooth process. In an informal way, apprentices have always been “tested” by their masters. From this point of view, new skills assessment procedures add value to a well-established practice. However, with regard to master craftspersons, the situation is quite different. Assessing the skills of craftspeople may question their own competencies, which may not always be welcome. Therefore, there have to be good reasons (such as quality issues raised by the market) and SICOs need good “marketing capacities” to overcome resistance and to make skills assessment accepted by master-craftspersons if it concerns their own assessment.

SICOs are in an excellent position for promoting the recognition of skills acquired in the informal economy. Case studies conducted prior to producing this guide provide one lesson learned: The ownership of the SICOs and their members is key to making skills assessment work. On the other hand, if assessment is being formalized, there is a risk that the responsibility previously assumed by SICOs shifts to the state authorities. If SICOs feel influenced by the state and lose autonomy, their ownership will decline. Hence the on-going technical and vocational education and training (TVET) reform processes which usually include skills assessment will have to recognize the SICOs as a key actor in an effective partnership.

This resource guide is divided into three main parts: Part A is more analytical and contains an overview of skills assessment practices of small industry organizations, and discusses why SICOs engage in skills assessments. Part B provides practical insight into how to initiate, organize and implement skills assessment, which potential stakeholders to involve, and how to link assessment with formal skills systems. It also discusses some important constraints and how to deal with them. The resource guide concludes with Part C – a section on lessons learnt.



# PART A THE ANALYSIS



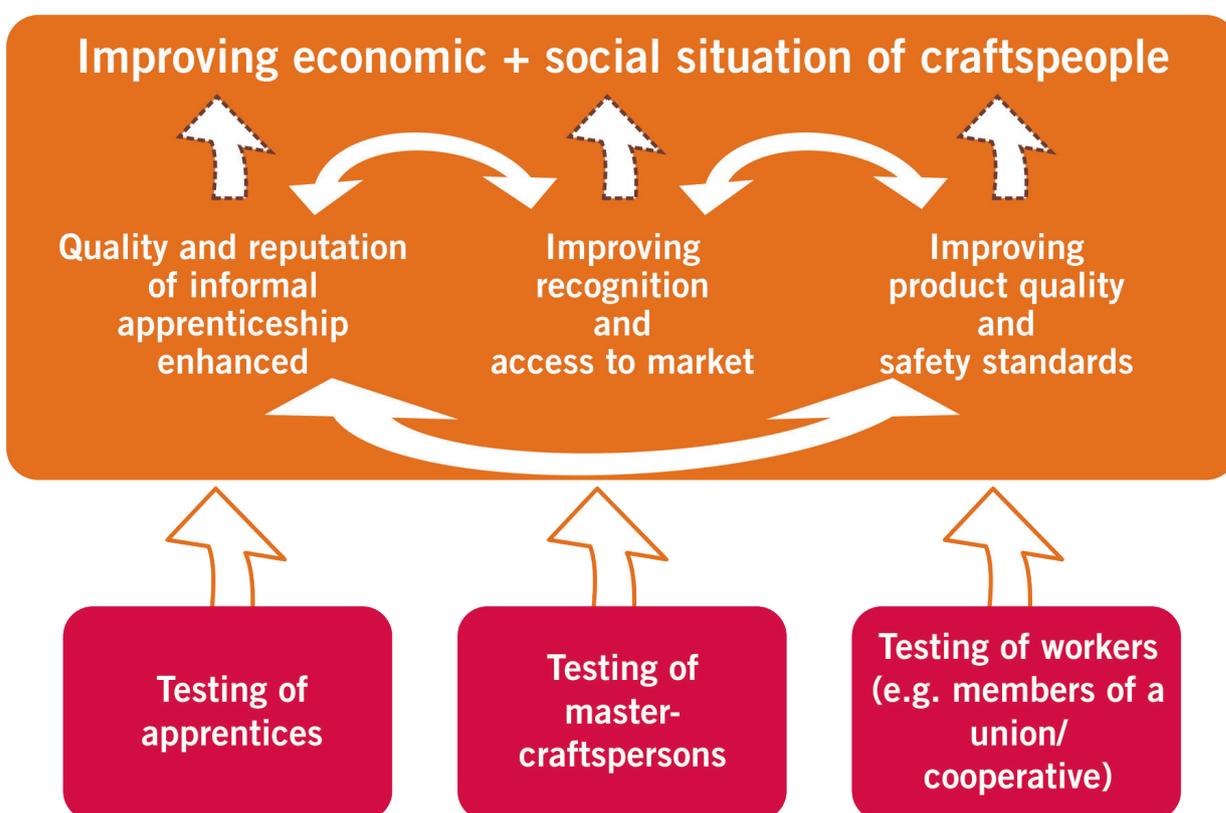
# A



## 1. Overview of skills assessment practices of small industry and community organizations in different countries and regions

The guide has explored the following three types of skills assessment by SICOs in the informal economy:

Figure 1.



The cases presented in this guide cover different target groups (apprentices, master craftspersons, workers) and different levels of SICOs (federations, single and multi-trade business associations, and a trade union):

- Skills assessment of apprentices
- Skills assessment of master craftspersons
- Skills assessment of workers/employees

Table 1. Overview of the case studies

Country	Name of SICO	Target group for assessment
Benin	Local federations of craftspeople (“collectifs”)	Apprentices
Rwanda	Trade Union COTRAF	Workers
Democratic Republic of Congo	Plumbers’ Association, APSKI	Apprentices, workers, master craftspersons
Ghana	Hairdresser’s Trade Associations	Apprentices, master craftspersons
Cameroon	The Intersectoral Craftworkers Association (GIPA)	Apprentices
Democratic Republic of Congo	Navigators’ Association, ANMACO	Workers
Colombia	Corporación Oro Verde	Master craftspersons/workers
Bangladesh	BRAC	Apprentices, master craftspersons (planned)
India	LabourNet	Workers

For further information on the cases please refer to the online publication “Case studies on skills assessments in the informal economy conducted by small industry and community organizations” available at [www.ilo.org](http://www.ilo.org).

## 1.1 Skills assessment of informal apprentices

Informal apprenticeship systems are the most important training system in many informal economies. In Africa, but also in parts of Asia, informal apprenticeships have a long history and are deeply rooted in society. A master craftsperson (MC) fulfils a social and economic function by passing on his/her skills to the next generation. The graduation of an apprentice in West and Central Africa is often a community affair, which underlines the social importance of apprenticeships.

In informal apprenticeships, skills are largely acquired “on-the-job” e.g. by observation and trial and error. Systematic assessment is not common. The MC uses his/her own (informal) criteria for monitoring the learning progress of an apprentice based on his/her experience as well as the “good practice” existing within a “trade community”. Hence, the assessment of the skill level of an apprentice primarily depends on the MC’s individual judgement rather than a common standard. The effect: apprentices with varying levels of skill.

Historically speaking, trade associations have played a decisive role in developing and reinforcing rules for apprenticeships. The early European trade associations (guilds) established guidelines that determined certain quality standards of a trade. In a “rotation” system a graduated apprentice or “journeyman” had to move from one MC to another so as to acquire a wider set of skills before he/she could return and become a master craftsperson and member of the guild him/herself. However, there is no evidence of the existence of any system for assessing apprentices by the guilds. Industrialization brought about change, making quality and standardization necessary. In this context, trade associations became a driving force in setting skills standards and introducing formal assessment mechanisms.

Competency-based trade test was introduced decades ago in countries with an Anglophone colonial history. These proficiency assessments have been open for all: graduates of training centres and for informal and formal apprenticeship. However, while these systems are popular with graduates of training centres, their outreach to the informal apprentices remained marginal. Causes include entry barriers like educational requirements, the costs for assessing and the limited economic benefit for someone being assessed.

It is in those regions with a long history of informal apprenticeship and the presence of strong SICO that skills assessment by SICO emerged first. In the late 1970s, trade associations in West Africa started to develop ideas about skills assessment in apprenticeship. This guide provides examples for skills assessment of apprentices from two West African countries: Benin and Ghana, and one from Central Africa (Cameroon). GHABA, a trade association in Ghana took first measures to organize skills assessment of apprentices for its members in the 1980s. Another example comes from Cameroon where the multi-trade association GIPA has been carrying out skills assessment of apprentices for 12 years. As discussed in section 2, the market pressure (e.g. customers demanding quality service) has been a driving force for initiating skills assessment. Members of trade associations realized that “bad service” or “bad products” could damage the reputation of their trade and harm business. By introducing assessments, skills standards can be set, which helps to enhance the reputation of craftsmen, secure markets and, above all, improve employability of apprentices.

No evidence for SICO involvement in skills assessment could be obtained from East and South African countries. In both regions, SICO have either been politically oppressed in the past (Southern Africa) or are a rather recent form of self-organization of craftsmen in the informal economy (East Africa). Cases from Asia and Latin America seem to be rarer or less documented, but among the nine cases included in the research, two are from Asia and one from Latin America. Further efforts are needed to identify SICO assessment practices in those regions. As far as countries in economic transition are concerned, larger business associations have initiated assessments as part of formal apprenticeships, but these examples are not considered in this guide.

In summary, three models for skills assessment of apprentices have been identified:

1. **End of Apprenticeship proficiency assessments**, solely conducted by the SICOs, with or without involvement of communities and municipalities.
2. SICOs providing **bridging courses** and conducting **pre-testing** whereby apprentices are prepared for trade test run by national institutions (in line with national qualification standards).
3. **Improved apprenticeship schemes combining on- and off-the-job learning (also known as dual system or alternance approach)** with a joint responsibility for trade test of the private sector (including small and medium-sized enterprises (SMEs) and the state).

*Note that the last approach as a specific model is not discussed in this guide, nor are assessments offered solely by non-governmental organizations (NGOs) or private training organizations without the involvement of small industry organizations.*



In the West African countries of Togo, Senegal, Burkina Faso and Benin, international cooperation has been aiming for decades to upgrade the informal apprenticeship system. It has now reached a level where adapted systems of dual apprenticeship are being introduced.

## EXAMPLES

In **Benin**, about 10 years ago, end of apprenticeship assessment was introduced (French: *EFAT*) in several regions of the country. These assessments are formalized at the local level in collaboration with municipalities. The local assessment procedures could gradually be replaced by a national certification system (CQM Certificat de Qualification au Métier (Occupational Skills Certificate). The system has been developed by the respective line ministries in collaboration with the National Federation of Craftspeople (CENAB).

In **Bangladesh**, BRAC (formerly Bangladesh Rural Advancement Committee), the largest NGO, pilots the upgrading of informal apprenticeship. Assessments include progress assessments and challenge tests conducted by the master craftsperson. The final assessment is organized in the workplace and conducted by BRAC's technical instructors with United Nations Children's Fund (UNICEF) technical consultants under the oversight of staff from the Bureau of Non Formal Education (BNFE).

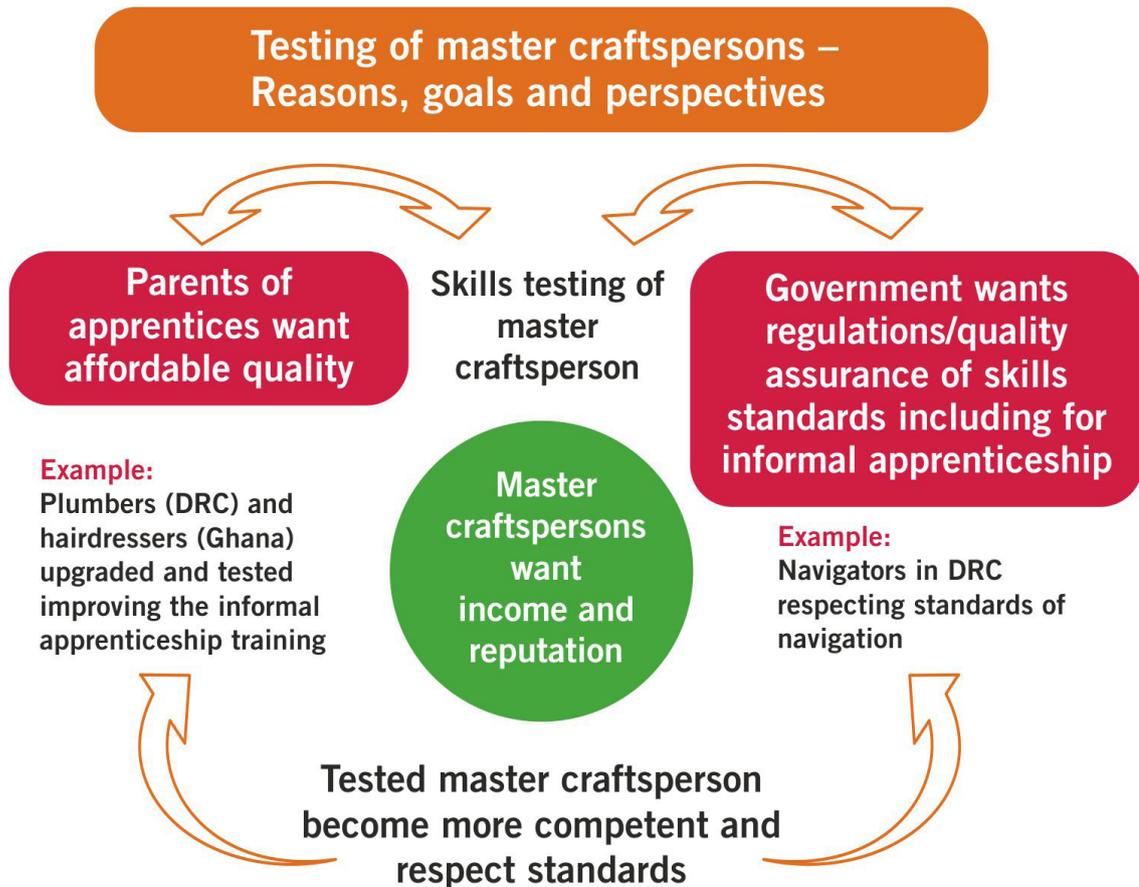
As part of reform to national TVET systems and the skills assessment of apprentices, the role of SICOs is now receiving greater attention. New, competency based certification systems could give increased recognition to skills acquired in an apprenticeship. The challenge will be to develop models that keep a balance between (1) a Government's desire to regulate and (2) the bottom up approach of assessments by SICOs i.e. to maintain and enhance the involvement and ownership of SICOs in the national assessment schemes.

### 1.2 Skills assessment of master craftspersons

Skills assessment of master craftspersons is less common as compared to skills assessment of apprentices in most informal economies. One reason might be that there are no rules that dictate who can open a business, and train apprentices (although there are few cases where only a licensed master craftspersons can open a business and train apprentices<sup>4</sup>). Another possible reason could be the social status of a master craftsperson. In contexts with a long tradition of informal apprenticeship, where master craftspersons enjoy a high social status within the community (e.g. in regions of West Africa), it may be assumed that the idea of assessing master craftspersons is less welcomed and seen as an interference from outside. The situation is different in regions where occupational status is less established and the need for skills upgrading is more pressing.

4. Case studies from Nigeria showed that some market areas are controlled by guilds, which allow only members to operate a business in "their" domain. Membership is restricted to those people who have graduated as apprentice in a member's business, R. Lange 2002.

Figure 2.



## EXAMPLES

The examples documented in this guide either come from contexts where master craftsmen have a lesser status in society and/or where a combination of market pressure and government regulations are strong motivating factors for the introduction of assessments. In the case of the plumbers association APSKI in **South Kivu** (DRC) both, the desire to upgrade skills and the impact of semi-skilled plumbers on the local market prompted the SICO to introduce skills training and assessment. Members of the association who have passed the assessment are issued a “professional badge” which provides them with an advantage in the market. The other example is the skills assessment of navigators on Lake Kivu as a collaborative effort of the Port Authority, the navigators association ANMACO and a certified training institute to upgrade safety standards in the navigation industry. For a description of the cases see Annex.

In **Ghana**, hairdresser associations offer bridging courses and pre-testing to graduated apprentices, workers and master craftsmen who want to obtain a nationally or internationally recognized certification. However, the assessment itself is conducted by national authorities.

### 1.3 Skills assessment for workers

Many workers in the informal economy have no access to formal certification, because of a lack of education, financial resources and sometimes awareness. Some trade unions representing workers in the informal economy have discovered skills assessment as a means to promote minimum wage for their members, improving work conditions and access to employment.

Three cases have been identified for skills assessment of workers by SICOs: the above mentioned case of nautical personnel in the DRC, assessment of construction workers in Rwanda and the certification of mine workers (members of a cooperative) in Colombia.



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## 2. Why engage in skills assessment – the perspective of small industry organizations and their members

This section discusses the motivation of SICOs and their members to become engaged in skills assessment. We first look at common issues and then discuss separately the motivation for (1) skills assessment of apprentices and (2) of master craftspersons and workers. Finally we discuss the influence of international cooperation.

### 2.1 Common issues

**Changing markets** and the need to improve **the quality goods and services** is a primary motivational factor for SICOs (and their members) to become engaged in skills assessment for both target groups, apprentices and masters/workers. In Ghana, for instance, the growth of a new middle class has resulted in a substantial push for quality services. The hairdressing industry is increasingly exposed to quality conscious customers. New cosmetic products reach the market – and a hair dresser must be capable of handling them. This requires the acquisition of new skills and a constant updating of knowledge about each new product in the market. The trade associations have determined that upgrading apprenticeship and upgrading the skills of master craftspersons are essential measures for their members to be successful in the market.

Another set of common factors is **reputation, status and professional pride**. The majority of people working in the informal economy have not progressed in education, stigmatizing them to some degree in their societies (note that this is less the case for successful master craftspersons who are economically successful and hence enjoy a good reputation in their communities). Receiving a certificate from a business organization is a motivational factor, as it tends to raise self-confidence and professional pride. As one interviewee from Cameroon expressed: “it uplifts us and gives more value to the crafts sector”.

For a SICO, engagement in skills assessment will likely **raises publicity and improve the status** of the SICO. Indirectly, skills assessment can also contribute to raising the status of a trade and of the crafts sector in general. In addition, skills assessment, often in combination with skills upgrading, can be an **income generating activity** for a SICO.

The motivation and ownership of master craftspersons in skills assessment is a decisive factor for the success or failure of any SICO assessment scheme. In the introductory stage in almost all cases, there has been some form of resistance from master craftspersons. In some cases it took many years of international cooperation efforts to introduce and institutionalize skills assessment in informal apprenticeships. Certainly, there is no fast track - these processes need time and continuous effort.

### 2.2 Key success factors for skills assessment of apprentices

In the light of constantly changing markets and with the need for skills standards becoming more obvious, the acceptance of systematic assessment of apprentices has been growing especially in West and Central African countries where there is a long tradition of informal apprenticeship. The key motivational issues for the main stakeholders involved - the SICOs, master craftspersons, apprentices and the community at large are discussed below:

### ***Set quality standards for informal apprenticeships***

A primary motivation for a SICO to engage in skills assessment of apprentices is to raise quality standards in a trade. In informal apprenticeship there is no conformity in standard setting. The training delivery and the scope of competences of apprentices largely depends on the competence of the master craftsperson and his/her readiness to share skills and knowledge. By introducing assessments, a SICO will set a common standard for quality for its members and the sector more broadly.

Setting standards is also a primary motivation of public stakeholders, who have the desire to “regulate” informal apprenticeships. While a certain level of regulation will be helpful to enhance competitiveness, overregulation/standardization that is not in conformity with market realities may produce negative effects (see more under section 6 on constraints).

### ***Provide incentives to complete an apprenticeship***

A skills assessment and credentials certifying their skills provides an important reason for apprentices to complete their apprenticeship. This is particularly important in societies where end-of-apprenticeship ceremonies are uncommon and where there is a risk that apprentices leave master craftspersons before they are fully competent, leaving them with incomplete skills sets, and less chances for decent work. If they leave, it limits master craftspersons’ chances to fully recoup their training investment, low completion rates are likely to lower the willingness of MCs to employ apprentices. Following the same argument, apprentices and MCs need to agree on the timing of the assessment.

Last but not least, parents expect a “good quality” apprenticeship – i.e. that their children are equipped with the right skills for being successful in the market. Assessment is setting standards, for the master craftsperson to impart skills and knowledge and for the apprentice to learn.

### ***Raise the self-confidence of apprentices***

Apprentices are interested in the assessment because it gives them more self-confidence. The key factor here is that through participating in a standardized assessment process they are exposed to “objective” assessment that is not guided by the interest of an individual master craftsperson but by a commonly agreed standard.

### ***Facilitate access to apprenticeships for poor people***

Another reason, e.g. given by CENAB in Benin, is to reduce the cost of informal apprenticeship as the traditional “liberation ceremony” is often extremely expensive and more so than the assessment fee. In other cases, the assessment was an additional cost factor, in which case it can become a barrier for poor people (see section 6 on constraints).

### ***Keep apprenticeships attractive***

With a growing desire for formal education (as a symbol of social achievement) certification of an apprenticeship can make it more attractive to young people. In Ghana, for instance, local SMEs have reported declining demand for apprenticeships, and whilst this trend has economic causes such as a lack of opportunities for employment and self-employment in many trades, the lack of “recognition” of apprenticeships plays an increasingly significant role.

### ***Enhance apprentice employability by broadening skills recognition and facilitating labour mobility***

Before assessment was introduced, skill recognition of a graduated apprentice was limited to the master craftsperson’s close community. Assessment by an association broadens recognition to all members of the association. Once a assessment is certified by a national SICO it further facilitates the mobility of apprentices, making it possible for them to move from one place to another in search of work.

...and the opposite: *Mitigating migration*

Enforcing national standards for apprenticeships may provide a quality boost to apprenticeship in semi-rural and rural environments. This has the potential to motivate young people to stay in their home town rather than leave in search for better apprenticeship in distant places.

#### *Facilitate business start-ups*

In some countries municipalities demand certificates for opening a business. A graduated apprentice without certification will face barriers to self-employment and business start-ups.

## **2.3 Motivation for skills assessment of craftspeople (master craftspersons and workers)**

From the perspective of communities, municipalities and public institutions, a primary aim of assessing master craftspersons is to ensure quality services and to assess a craftsperson's ability to train apprentices.

The viewpoint of master craftspersons is different. The case studies portrayed in this guide show that convincing arguments for skills assessment of master craftspersons have to do with market pressure or changes in the market, and sometimes with government regulations (when safety standards are involved), or both aspects together. In the case of workers (both casual workers on contracts and wage-employed) the main expectation on assessment of skills is to obtain better wages and improving work conditions. In general, skills assessment is attributed to improved social recognition and reputation.

The paragraphs below highlight the main issues related to MCs and provide examples from the case studies:

#### *Market regulations*

Changing market regulations often has direct impact on business and can be a primary motivating factor for a master craftsperson to certify skills. One example is a decree issued by several municipalities in Ghana where a hairdressing saloon can only be opened and registered if the owner/master craftsperson has been certified. This new regulation is a motivating factor for master craftspersons to enrol in upgrading/bridging courses and to sit for exams organized either by the SICO or by a national authority. Another example is the certification of navigators in South Kivu, DRC where the port authorities together with community groups and the ship-owners association have decided to introduce skills assessment as a means to improve safety standards. Similar examples have been noted in other regions (e.g. certification of minibus drivers in several countries by driver associations).

#### *Access to new markets*

One strong motivational factor for skills certification is access to new markets. Some SICOs (e.g. COTRAF-Construction in Rwanda and APSKI in the Democratic Republic of Congo) have noticed that public offices, registered companies (Rwanda) and international organizations (Congo) only give contracts to companies which employ qualified craftspersons who can prove their competencies. A certificate indicating the occupational or skill level of its holder has turned out to be a prerequisite for accessing these public contracts and motivated SICOs to organize skills assessment for its members, in both cases in conjunction with skills upgrading. The Corporación Oro Verde (COV) in Colombia has introduced a label for socially and environmentally sustainable mining practices which provides certified miners with favourable access to markets and a 3 per cent premium on top of a guaranteed price. Another 13 per cent of the premium are invested into a community fund for financing of community development initiatives. The certification is monitored by an external national research institution, which is quite common in developed countries and assessments in the formal economy.

### ***Better wages with a proven professional profile***

A primary aim of unions is to ensure adequate wages for its members. COTRAF-Construction, a union of construction workers in Rwanda, noticed the influx of construction workers from neighbouring countries like Uganda, who are often equipped with better skills and thus can demand higher wages. Compared to its neighbours, Rwanda's crafts sector is not very well developed. Migrants who returned to Rwanda after the genocide ask for qualified work in construction often without possessing the skills demanded in the market. Hence, the Union intends to do both, qualify and certify its members ("to give our members a more professional "profile" so that they can compete in the market with migrant workers"). This case indicates: In order to be able to advocate for decent work conditions in an industry, skills assessment may be indispensable.

### ***"Safeguarding" the trade and protecting the market***

To safeguard the reputation of a trade and to protect a market can be a strong motivational factor for craftspeople with professional pride. The trade association of plumbers in Bukavu (DRC East) wants to demonstrate their competence against "pirate-plumbers" who reportedly are damaging the reputation of plumbers by providing bad services. These fake plumbers not only pretend to be experts while in reality they have little expertise and experiences, they also destroy prices. The plumbers' association has thus introduced compulsory skills assessment of its members. A professional badge is given to those who passed the assessment successfully, so that they can show clients that they are "true professionals".

## **2.4 The role of international cooperation in motivating and initiating SICO engagement in skills assessment**

The study preceding the development of this guide identified a number of cases where SICOs started skills assessment on their own initiative. In some cases (hairdressing SICOs in Ghana, CENAB in Benin and GIPA in Cameroon) exposure to international organizations and/or exchange with other Business Organizations abroad was a key factor at the beginning. Later, however, the SICOs fully took up the initiative.

In other countries, development agencies have been working for decades with the small enterprise sector and trade associations for the upgrading and systematizing of informal apprenticeship. Furthermore, the reform of the TVET systems, which includes certification of apprenticeship, is in many cases strongly supported by international cooperation. It can be assumed that the changes made in these countries have, at least partially, been influenced by international cooperation. What is important is to ensure that SICOs develop ownership in skills assessment and are closely involved in governing these systems at the national and local level.

# PART B THE PRACTICE



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# B



### 3. How to initiate, organize and implement skills assessment by SICOs

This section describes in detail the various steps taken by SICOs for initiating, organizing and implementing skills assessment. It also elaborates on the methods applied such as the development and selection of assessment tools (see glossary). Section 3.3 on assessment design diverges from the approach taken in other sections and establishes a number of basic rules and concrete measures that might go beyond current practice. SICOs are invited to assess in how far current practice can be improved based on the proposed approach. SICOs interested in initiating skills assessment should assess how the basic design rules can best be integrated in the new practice, or whether they prefer to seek advice from local training providers or other experts who might be able to assist them.

The main procedure for organizing and implementing skills for the two target groups (apprentices and master craftspersons/workers) are essentially the same. Still, there are a number of important differences. The most important difference: while skills assessment for apprentices is organized as a specific activity (as the training itself takes place at the workplace), **the assessment of master craftspersons is often combined with skills upgrading** (with the latter coming first).

#### 3.1 Initiating skills assessment in SICOs

This section describes key success factors for SICO skills assessment. The issues discussed apply for both: initiating skills assessment for apprentices and craftspeople (master craftspersons and workers).

**Influential leadership with a vision:** In nearly all cases studied, influential SICO leaders with a vision for quality service have been a starting point and driving force for initiation of skills assessment.

**Exposure to international experiences and trade competition:** Exposure to international experiences is helpful to sensitize SICO leadership for skills assessment.

#### EXAMPLE

The leadership of a **Ghanaian** hairdresser SICO was exposed to both quality training in the UK and to other SICOs abroad who had introduced systematic skills assessments. A further factor for creating awareness was the participation in trade competitions in Africa which reinforced a sense of quality service among the SICO leadership.

**Sensitization through collecting feedback on services from clients:** Feedback collected from clients can bring about a change of perceptions and increase awareness.

## EXAMPLE

Clients in **Bukavu** (DRC) complained about the poor quality of plumbing services in the city, which was a triggering factor for the SICO to take action. The hairdressing association GHABA in Ghana participated in market fairs and collected feedback from clients through discussions during the trade fairs and a questionnaire survey.

**Reflecting the market situation:** The leadership of a trade union in Rwanda realized that they had to undertake action to prevent jobs losses and decreasing income while better qualified and certified workers from other countries were replacing their members on construction sites. Introducing skills assessment for its members was a viable approach to maintain a market position.

**Exploring the potential gains for the SICO:** Attracting new members is important for a SICO in order to grow and gain reputation and influence. If a SICO introduces skills assessment it extends its services and can increase popularity, both measures are likely to attract new members.

## EXAMPLE

GIPA in **Cameroon** organizes a large and celebratory official ceremony when delivering the certificates, thus increasing its popularity. The SICO reported that craftsmen are interested to join GIPA because of the possibility for apprentices to be officially certified. Similar experiences have been reported in Benin where the number of associations joining the multi-trade organization Bohicon has risen from 10 to 40 since assessment was introduced.

Skills assessment, as explained above, can be a viable source of income for a SICO. In Ghana, SICOs offer both, skills upgrading and assessment and thus increase the sources for income generation for the SICO.

**Technical cooperation for building capacities:** As described in the preceding section, international technical cooperation in several cases provided crucial assistance for initiation and institutionalization of skills assessment. While technical assistance can provide key inputs for development of skills assessment systems and human capacity development, it also carries the risk that structures and systems created may not be sustainable. Hence a decisive factor is the actual ownership of a SICO from the offset, as shown by examples in Benin (CENAB) and Cameroon (GIPA). Both organizations have been cooperating with international partners over a long period of time, but in a way that has not undermined the sustainability of the SICO's own effort in skills assessment.

**Collaborating with state actors** in the initiation process has many advantages. SICOs can benefit from the expertise of public assessment institutions, especially when setting up the assessment scheme. Public assessors can be involved in the assessment process. The involvement of public entities in graduation ceremonies (e.g. the respective line ministry) brings visibility to the crafts sector as such activities are often covered by the media. In the case of GIPA, the graduation ceremony is carried out by the Chamber of Commerce with representation of higher state authorities, hence the link to formal institutions.

**Establishing transparent and democratic principles:** In interviews, SICO leaders said that an organization needs to apply certain democratic principles and has to have transparent procedures in order to implement an assessment scheme successfully. This, for instance, relates to processes such as the election of assessment committees, establishment of fair and transparent assessment procedures, availability of complaint mechanisms etc.

## CONSIDER THIS

### Assessing demand – when to offer skills assessment and when better not to

- ☑ Is a sufficient number of member businesses/craftspersons training the range of skills targeted for the assessment?
- ☑ Is a sufficient number of member businesses/craftspersons willing to engage in preparatory meetings and implementation of the assessment, and/or assign this task to qualified staff members to represent the business?
- ☑ Is the SICO sufficiently representative to establish an assessment on its own? Or is it more effective to join forces with other SICOs in the same trade?
- ☑ Are skills assessments for the same occupation/range of skills conducted by other entities, including the government? Have you assessed the difference in skills requirements?
- ☑ Has a preliminary meeting of interested businesses/craftspersons confirmed interest?
- ☑ Have you collected existing relevant material, including DACUM profiles and sample assessments to estimate the amount of work needed to prepare for and conduct assessments?

## 3.2 Building awareness and ownership amongst SICO members

All successful SICO assessment schemes have one thing in common: the active involvement of experienced and respected members (master craftspersons) during planning and implementation of the scheme. If an assessment scheme is being formalized and individual master craftspersons are becoming less involved (e.g. officially accredited assessors replace the master craftspeople in an assessment committee) reluctance can develop and ownership may drop. The following section will outline recommendations on how to successfully build awareness and maintain ownership of SICO members.

### 3.2.1 Raising awareness on skills assessment of apprentices

#### How to convince master craftspersons:

- Involving them actively in the design of the scheme and during implementation:
  - skilful/experienced master craftspersons may become key persons in developing assessments and acting as assessors
  - elected master craftspersons should be involved in assessment committees as a possibility to display their abilities and gain public acknowledgment
  - elected master craftspersons should have the possibility to sign or co-sign certificates

- Showing the advantages for the business:
  - new skill standards will lead to improved apprenticeship training with direct benefits for the business: better trained apprentices, introduction of new skills (and services);
  - the assessment of their apprentices also has an indirect effect on the knowledge of the master craftsmen: they (have to) stay up-to-date and can learn new things as a result of a sector standard being decided.
- Showing the possible impact on their reputation:
  - good results of their apprentices in exams show the competency of the master-craftsmen and contribute to an enhanced reputation.

### Possible challenges to be considered

Assessment of apprentices may imply that master craftsmen have something to lose:

- Master craftsmen may be concerned about a loss of respect, i.e. apprentices respect them less once another “authority” (SBA, the municipality) becomes the judge of the required standard.
- Master craftsmen may be afraid of a loss of reputation in case their apprentices fail in the assessment.
- Assessment costs may limit the capacity of an apprentice to pay for the training received under an apprenticeship.
- Master craftsmen may lose money when the traditional “liberation ceremonies” (that have a high price) are replaced by official ceremonies (in cases where liberation ceremonies are common practice).
- Master craftsmen may lose authority once they are replaced by state appointed assessors.
- If apprentices can register for tests without the consent of their master craftsman, early completion might lead to losses for the business, and thus disincentives for master craftsmen to take on new apprentices. On the other hand, if apprentices succeed in assessments, this might prove that apprenticeship periods are too long, an issue worth while addressing.



## CONSIDER THIS

### How to overcome these challenges

These obstacles need to be taken seriously and are not easily addressed: In some cases it might not be possible to fully solve them.

**Loss of respect.** There is evidence that skills assessment of apprentices rather than resulting in a loss of respect produce the contrary effect: apprentices respect their masters more than before. Apparently, a more formalized procedure makes apprentices aware that their masters are involved in the assessment and thus they try to behave well.

**Loss of reputation in case apprentices fail the assessment.** This issue is a fact that cannot be prevented. However, master craftspersons can be sensitized to prepare their apprentices well so that they succeed. In Benin and Ghana master craftspersons practice a “blind exam” as a pre-testing. GIPA in Cameroon also introduced this when they noticed that too many apprentices failed.

**Loss of money.** Master craftspeople, like those in Ghana, might fear that apprentices will be less willing to pay apprenticeship fees. This might be the case, but on the other hand the assessment becomes a motivation to complete the apprenticeship and not to drop out. In countries where graduation ceremonies exist, master craftspeople can no longer charge for them.

**Loss of authority.** The loss of authority once the master craftspersons are replaced by state appointed assessors and once they are no longer allowed to sign the certificate, is a serious challenge that not only affects the status of the individual master craftsperson but the whole crafts sector. SICOs should advocate for involving master craftspersons as much as possible in the procedures and maintain the practice of master craftsperson’s signing the certificate.

### 3.2.2 Raising awareness of SICO members about their own skills assessment

#### How to convince master craftspersons:

- **Demonstrating quality to customers:**  
Being able to show a certificate of skills assessment proves quality to clients. This means more orders and more income.
- **Showing their ability to stay up-to-date with new technology:**  
The most common and useful practice is to connect skills assessment of master craftspersons to upgrading of skills, e.g. to keep up with technology changes or to offer new advanced services. Skills upgrading of master craftspersons will be of benefit for apprentices too.
- **Improving their reputation:**  
Being a certified craftsperson and showing it, for example, with a professional badge uplifts status and reputation.

#### Possible challenges to be considered

- Master craftspersons may be of the opinion that their knowledge is sufficient and that there is no need for improvement as far as their work is concerned. As a result they may believe that assessment is not necessary.

- Being tested may also be perceived as putting them on the same level as their apprentices. This could be seen as a loss of honour.
- In case they fail the assessment, damage may be caused in a number of ways: the loss of reputation would make them loose apprentices and money at the same time.

The following sections describe the process of designing and organizing the skills assessment.

Figure 3.



### 3.3 Designing the assessment

When designing an assessment the following questions need to be addressed:

#### 1. Whom are we assessing?

- Do we assess (1) an apprentice, (2) a master-craftsperson or (3) different categories of workers,
- What **skill level** shall be covered by the assessment? (semi-skilled worker, skilled worker, advanced level/specialist)?
- What is the educational background of the average candidate? What language do the candidates speak → selection of appropriate **methods of assessment** (oral, written, use of language)



2. **What work-tasks** should this person be able to perform? What essential technical and non-technical skills are needed? → **selection and design of assessment items**
3. What are the minimum standards for good quality work in the market? → **identification of assessment criteria**

Most small businesses use only three job titles: the “apprentice” (French: *apprenti*), “journeyman or skilled worker” (someone being hired for a job; French: *ouvrier*) and the “master craftsman” (French: *maître artisan*) who usually owns the enterprise. Skills assessments for apprentices commonly aim at the level of a skilled worker.

Skills assessments for workers can be organized at different skill levels. Depending on the sector, occupations are further differentiated by skill levels. A SICO might opt for assessments at one or different levels (see example of Rwandan construction sector below), or use national occupational titles that refer to different skill levels (The navigator’s association in the DRC uses the titles: matelot (first grade), steersman (second grade) and captain (third and fourth grade) for the nautical personnel.

Occupational profiles form the basis of assessment items since they define what a competent worker should be able to do. The following section introduces DACUM as an efficient methodology for occupational profiling (see 3.2.2), and discusses important quality considerations. It also explains how assessment items should be designed and selected to ensure an objective, reliable, and transparent assessment.

SICOs should not strive to copy the complex assessment systems that the formal training system usually establishes. Yet it is important to bear in mind that a poor selection of assessment items, and random grading can jeopardize the whole process, if businesses and community members put the quality of the assessment in question.

If SICOs have access to resources of national training authorities, such as occupational profiles or skill standards, they can start by examining if any of the existing material matches the skill requirements in their context, and adapt them. If they do not have access, this is a general advocacy topic to be addressed in national level dialogue.

### 3.3.1 Using existing occupational profiles and adapting them

Existing occupational profiles can be used as reference material to arrive at the skill level that is targeted for assessment. SICOs need to get hold of the profile and, instead of reinventing the wheel, can reduce the number of duties and tasks to align them with the specific new occupational profile, and add further tasks in case some are missing.

The following example of a plumber demonstrates how several duties are taken out from the original profile (level II in the national qualification system) transforming it from an urban context into requirements for a plumber catering mainly to village customers (equivalent to level I). The duties and tasks that are removed from the original profile are in grey, the ones remaining for the village plumber are in black. Duties are numbered A,B,C... and are composed of tasks which follow numbering A1, A2, A3 and so forth.

## EXAMPLE

### Adapting the occupational profile of urban plumber to village plumber

A. PLAN WORK					
<b>A1</b> Prepare work schedule	<b>A2</b> Determine required tools and manpower	<b>A3</b> Assign work to subordinates	<b>A4</b> Determine labour charges	<b>A5</b> Provide transport to workers	<b>A6</b> Maintain cleanliness of the workplace
B. OBSERVE HEALTH AND SAFETY REGULATIONS					
<b>B1</b> Clean work area	<b>B2</b> Promote health and safety awareness	<b>B3</b> Provide first aid facilities	<b>B4</b> Promote HIV/AIDS awareness	<b>B5</b> Observe precautions on prevention of HIV/AIDS	<b>B6</b> Select tools and equipment
<b>B7</b> Observe occupational health and safety regulations	<b>B8</b> Issue protective gear	<b>B9</b> Wear protective clothing			
C. MAINTAIN COMMUNICATION					
<b>C1</b> Agree on contract with client	<b>C2</b> Maintain a daily attendance register	<b>C3</b> Delegate work	<b>C4</b> Appraise subordinates	<b>C5</b> Recommend subordinates' disciplinary action	<b>C6</b> Pay workers
<b>C7</b> Write progress reports	<b>C8</b> Educate users on the use of appliances				
D. INSTALL COLD WATER SYSTEMS					
<b>D1</b> Inspect the building	<b>D2</b> Prepare quotations	<b>D3</b> Deliver materials to the site	<b>D4</b> Chase the wall	<b>D5</b> Perform pipe work	<b>D6</b> Fit taps
<b>D7</b> Fit control valves	<b>D8</b> Set up tank stand	<b>D9</b> Connect the tank to system	<b>D10</b> Fix appliances	<b>D11</b> Test the water system	
E. INSTALL DRAINAGE AND SEWERAGE SYSTEM					
<b>E1</b> Excavate trenches, manhole areas, soak-pit and septic tank	<b>E2</b> Lay drainage pipes	<b>E3</b> Incline the pipe to determine the gradient	<b>E4</b> Sand-bed the pipes	<b>E5</b> Construct manholes and septic tank	<b>E6</b> Fit air relief valve
<b>E7</b> Test the drainage system	<b>E8</b> Back-fill trench and soak pits	<b>E9</b> Cover soak with polythene paper			
F. INSTALL GAS SYSTEM					
<b>F1</b> Determine the materials required	<b>F2</b> Determine the cost of the materials required	<b>F3</b> Install gas pipes	<b>F4</b> Connect compressed gas cylinders	<b>F5</b> Fit safety valves	<b>F6</b> Pressure-test the joints
<b>F7</b> Test the appliances	<b>F8</b> Orient the users				
G. CONDUCT PROFESSIONAL DEVELOPMENT ACTIVITIES					
<b>G1</b> Participate on courses and seminars	<b>G2</b> Read books and publications	<b>G3</b> Train subordinates	<b>G4</b> Provide up-to date tools and equipment	<b>G5</b> Share information with colleagues	<b>G6</b> Recommend subordinates for promotion
H. MAINTAIN AND REPAIR INSTALLATIONS					
<b>H1</b> Identify the problem	<b>H2</b> Prepare a maintenance schedule	<b>H3</b> Prepare tools and equipment	<b>H4</b> Replace damaged parts	<b>H5</b> Clean installed appliances	<b>H6</b> Clean water storage tank
<b>H7</b> Service tools and equipment	<b>H8</b> Unblock pipes	<b>H9</b> Show clients repairs done	<b>H10</b> Carry out periodic check-ups		

Source: NVQF Uganda

The tasks in grey are relevant for plumbers in urban settings, but much less so in rural areas. Different types of demand in villages, such as low demand for hot water, lead to certain specializations. Hence, certain tasks and duties can be removed from the occupational profile. The occupational profile consisting of 8 duties with more than 6 tasks each is shortened to just 5 duties with a smaller number of tasks per duty.

### 3.3.2 Ensuring accuracy of occupational profiles

Occupational profiles need to be accurate so that SICOs can conduct quality assessments that are objective. Before occupational profiles can be used as a basis for assessment item development, existing profiles should be revised or screened, following the procedures described below. The result of this exercise may also indicate what kind of adaptations might be advisable during the first revision of the profiles within a few years.

If no occupational profile is available, or if the existing ones are too far from the reality of SICOs, a DACUM workshop can quickly and without major investment develop a new occupational profile. While there are also other methods of occupational profiling, DACUM remains the most efficient methodology available.

## CONSIDER THIS

### The DACUM methodology of occupational profiling

DACUM (Developing a Curriculum) is a quick method to carry out an occupational analysis at a low cost. It uses the technique of team work, with teams formed by “trade experts” (e.g. a group of master craftspersons) who have in-depth experience in the occupation that is the object of the analysis. The aim is to describe in a clear and precise way the skills and knowledge required by a job position/job title.

The main product of a DACUM process is a so called “DACUM Chart” which analyses and describes the main duties of a job position and the tasks associated with the duty.

In addition to defining the specific tasks the DACUM Chart identifies specific “work enablers” or essential soft skills such as:

- general knowledge needed for the job such as: the handling of tools, equipment and materials commonly used in the market, new technology trends
- worker behaviour (personal traits and inter personal skills)
- tools and equipment used

A DACUM workshop typically lasts 2-3 days and involves a group of five to twelve practitioners. The group needs to be guided by an experienced facilitator.

The quality of occupational profiles should be verified in four steps. First, task descriptions need to follow a set of general rules to serve as a basis for assessment development. Second, work sequences are traced to ensure that the profile is comprehensive, and in line with the assessment developers’ own experience in the occupation. Third, duties and/or tasks are screened for consistency to familiarize assessment developers fully with the profile. Fourth, tasks and work sequences are labelled – practice-related tasks are separated from purely theoretical tasks and from tasks requiring social competency – to establish an overview of the variety of items needed to cover the profile in the assessment.

## 1) Verifying task descriptions

It is usually easy for experienced craftspersons to describe products or services they can offer in contrast to workers in other trades. The resulting list of products or services is not suitable for structuring an occupational profile on the task-level because of a simple reason: This list can be continued nearly endlessly by making slight variations.

### EXAMPLE

In the tailoring occupation, instead of listing varieties of products like shorts or trousers, the focus should be on underlying tasks such as:

- take measurements,
- make seams,
- assemble garments etc.

It is the task that provides the underlying training content and the related estimate for the complexity of the skills.

The *product* “make a steel gate” (as a typical response given from someone working in steel fabrication) needs further investigation before the actual list of tasks can be defined, like

- sawing of steel bars by hand and machine.
- weld steel bars and profiles of max. 10 mm thickness” etc.

### CONSIDER THIS

To be sure that the task descriptions are correct the following list of general rules is helpful: A task

- describes a unique procedure that may result in a product /service
- does not refer to a single tool or equipment
- can be performed independent of other tasks (separate entity)
- begins with an action verb and does not refer to knowledge
- can be broken down into steps of work

## 2) Tracing work sequences

Work sequences reflect the real work situation and therefore also constitute an important basis for assessment sequences.

The SICO team tasked with developing the assessment should start by compiling the ten most essential work sequences that represent typical job requirements in their occupation. This serves as verification whether any essential occupational content has been missed during the DACUM profiling process. Generally, this is an easy task for trade practitioners and helps ensure that no common work sequence is missing. All essential work sequences should be reflected through tasks in the profile. If a task was found missing, it needs to be added.

### 3) Verifying the number of duties and tasks

#### a) Is the total number of duties unusual?

#### CONSIDER THIS

#### Rule of thumb for total number of duties

A list of more than ten duties is fine as long as the occupation has a complex overall range of competencies. An occupation in the informal sector may generate DACUM profiles with half that number on average.

More complex occupations such as air conditioning and refrigeration technician can have a dozen duties. A number of 3 to 5 duties would be more common for occupations acquired in small businesses in the informal economy. Yet complex occupations like car mechanics or tailoring, whether taught in formal or informal settings, will easily exceed 5 duties.

#### b) Is there an excessive number of tasks per duty?

More than 12 tasks in one duty can be a sign for a duty that might be better broken into two duties.

Or, it can indicate that some tasks are no real tasks but rather a single step in a related sequence of steps that make up one task. A narrow-scoped description of tasks/steps represents an undesirable flooding of the profile with details. They respectively generate very few qualifiers for assessment.

#### EXAMPLE

**In a duty “Perform maintenance work”** the task “check schedule” may be only a first step in the work sequence of the next task “perform maintenance according to schedule”

### 4) Labelling tasks in DACUM profiles to structure the types of assessment required

Authors of occupational profiles are usually not concerned with the question of how such competencies can be assessed. Test item developers look at the given profile with a different interest. They are supposed to design test items which finally help to assess the performance of candidates who want their qualifications recognized.

Occupational profiles are a critical reference material for assessment, in particular if each duty and task of the profile is labelled with respect to their importance for assessing. Tasks and duties can either relate to:

- practice performances,
- theory know how,
- social competencies, or
- all of the above.



The labels help to illustrate the variety of competencies needed and to control coverage of the profile during the process of compiling a test bank.

### Tips for labelling tasks in DACUM profiles

P = Duties/tasks to be assessed by means of practice performance. In its purest form it means handling of typical equipment or material. It may include direct contact with customers in various degrees. In some occupations where customer case is an essential element of the occupational profile (such as hair dressing and cosmetology), duties/tasks labelled P often come in combination with category S (where particular social competency is required).

Label P always comes in combination with related theory items of category T!

It makes sense to further distinguish between wide-scoped duties/tasks (= PW) and narrow scoped duties/tasks (= PN).

PW = Duties/tasks covering a wider scope than *one performance test item* can cover. Occurrence of PW could generate a warning signal if its complexity cannot be clarified and backed up e.g. by a detailed list of equipment (as should appear in the additional DACUM information list).

*Example:* “Maintain and install electrical appliances”

PN = Defines narrow scoped tasks and requires the test item developers to *cluster several tasks before they can compose a meaningful sequence of steps for one performance test item.*

*Example:* “Prepare beds”, “Store records”, “Prepare work area”

S = These tasks *require major social competency.* Assessment is carried out simultaneously with the technical performance. In its most typical form the task requires social inter-action with real clients/customers including physical contact. It may lead to the substitute of using role actors or models (like using dolls or the hair of other apprentices in the assessment process for hairdressers). Such tasks require a different type of assessment procedure, e.g. interaction is assessed by incorporating body language or from the content of conversations showing empathy or the lack of it. An assessor will e.g. watch if a beautician apologized for hurting the patient or if she blames the client instead.

*Example:* “Orient the user of the appliance”, “demonstrate welcoming of customers”, “provide advice to customer on the appropriate use of cosmetology products”

T = *Covers all tasks to be addressed in theory test items exclusively (!).* Knowledge testing always comes in combination with category PN/PW (e.g. functional understanding) or S (e.g. reasons for rules for treatment), but is not indicated separately. As soon as it is the only means of coverage for assessment, this task will be classified as T. So, *whenever a real physical performance cannot be used as a base for assessment of this DACUM task the label T will be attached.*

*Example:* “List the materials required”, “interpret instruction manuals”

X = DACUM tasks of that category describe generic and rather complex planning and management duties/tasks which occur as part of the DACUM profile in many occupations. Yet many are not typical for profiles in the informal economy, and hence are ignored for assessment development in this context. However, some items such as “instruction skills” may be useful for skills testing of MC.

*Examples:* “Motivate apprentices and workers”, “conduct instructions”

## CONSIDER THIS

### Overview list of labels: Types of tasks for test item development

A list of more than ten duties is fine as long as the occupation has a complex overall range of competencies. An occupation in the informal sector may generate DACUM profiles with half that number on average.

- “P” Duties/tasks to be assessed by means of practice performance.
- “PW” Is used as a label for categorizing duties/tasks which require more than one performance test item.
- “PN” These tasks require the test item developers to cluster several tasks for a single performance test item.
- “S” These tasks require major social competency and need special assessment procedures.
- “T” Covers all tasks which need to be addressed by theory test items exclusively. They cannot be directly linked with a performance item.
- “X” Describes generic and rather complex planning and management duties/tasks which cannot be tested within a limited time frame.

When all duties and tasks are labelled, assessment items can be selected or newly developed, according to the questions raised in the following section.

#### **3.3.3 Selecting and designing assessment items for a SICO item bank**

A test item bank is the storage tank containing all test items that serve assessment panel members at the SICO-level to put together complete, valid and representative assessments. The item bank is meant to contain several items addressing the same task so that successive tests may address the core contents again and again, but the related items differ in wording, style or difficulty level. Test item banks can also be managed and used jointly by several SICOs addressing the same occupation. Designated teams of assessment item developers ensure the quality of items that enter the bank and engage in developing new items, adapting items from other countries/regions, and scrapping outdated ones on a regular basis.

## EXAMPLES OF CURRENT PRACTICE

In **Djougou** (Benin), the assessment panel chooses one single test item using a secret selection process which involves a selection committee and the master craftspersons. The test item selected is mandatory for the candidates. When preparing for the test, the committee responsible for the annual test item selection for dressmakers asks master craftspersons to present at least ten different test items. The master craftspersons then have to explain every detail of the test items to the committee: the degree of difficulty in producing each item, the specificity of the material used, the time needed, the cost of the material etc. The committee then selects one single item for the upcoming test. In the case of carpentry, the choice is made out of two items only.

In **Bohicon** (Benin) a different procedure is followed: the committee selects three test items, and the candidate then has to randomly choose one from three envelopes.

In the case of the multi-trade organization **GIPA** (Cameroon), each trade association is asked to present items. The persons in charge of training of these associations collect the proposed items of each trade and propose them to the Executive Office of GIPA who then selects the respective items.

The **hairdressers association GHABA** (Ghana) is a national association which is present in all provinces of Ghana. Proficiency tests are conducted once a year on the same day in all the branches. Test items are collected and submitted to the national education committee by each branch. The items are reviewed and selected by the national committee.

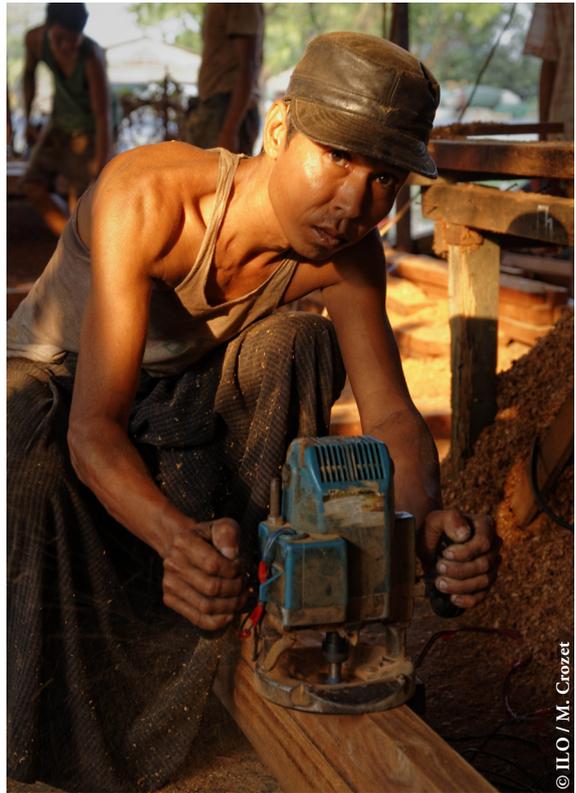
For **the plumbers' association, APSKI** (DRC), the items for skills testing are discussed and selected by a committee, composed by representatives of the plumbers' association, the training centre, and technicians sent by government institutions. In addition, there is a list of 49 trade theory questions. The committee has coded these 49 questions. During the test the candidate draws a question from the coded list.

In the case of the **navigators** (DRC), the test items are selected by representatives of the navigator's association ANMACO, (who are also the trainers of the upgrading courses), and the Commander of the Port (representing the public authority). The trade knowledge of a navigator is defined by the national legislation for navigation, thus the testing is shaped according to these formal requirements.

A team of assessment item developers should comprise at least three practitioners of the respective occupation. Training-minded employers are usually willing to free their best employees or very good ones for some three days, but usually not more than twice a year. The attraction for the employees is the intensive exchange with able colleagues from other companies.

For the drafting of new assessment items, the following questions help guide the selection of appropriate items.

- Which practice performance sequences are suitable for assessment?
- How to design good practice performance assessments?
- How can duties/tasks that require social competency be included in practice performance assessments?
- Are assessment items representative of the whole occupational profile?
- How to select assessment criteria that are objectively verifiable?
- How can theory test items best be designed?
- How can generic competencies be covered in assessments?



In order to assure quality, a practice that has proven useful is to have more than one developer team work in parallel. Each group presents draft material to the other group, receives comments based on previously agreed quality criteria, and improves the assessment item further before it enters the test bank.

**a) Which practice performance sequences are suitable for assessment?**

Each test item needs to be composed of a logical sequence of work steps. Duties or tasks labelled PW usually require more than one performance test item. Those labelled PN need to be grouped with other tasks to constitute a good work sequence to be assessed. Overall, the entire assessment should aim at systems, processes, and equipment functioning and not only at achieving particular skills like drilling holes, fixing joints etc.

Often, several duties in DACUM charts have similar tasks, so that these tasks need to be included in one assessment item only.

**b) How to design good practice performance assessments?**

If the performance sequence is chosen, item developers should list all tasks and steps included in the sequence. Then they assign performance criteria for each task/step, and add marks for each one depending on the level of importance, risk or difficulty. Criteria can relate to how the task was carried out (process) or to the end or intermediate result (product) of the practice performance. It is helpful to use separate columns for process and product-related marks on the sheet meant for the assessor. Whenever text descriptions are not sufficiently clear, sketches and drawings can help. It is good practice to convert safety rules into assessment criteria.

The annex includes several examples of practice performance assessment items.

**c) How can duties/tasks that require social competency be included in practice performance assessments?**

Assessment of social competency can be integrated into practice performance assessments by interrupting the work and explaining a situation that the candidate might witness. Candidates can either be asked to describe their behaviour, or be engaged in a role play.

## EXAMPLE

- a) While the candidate is performing a practical task the assessor can stop the candidate and start a discussion about a potential conflict related to mobbing of colleagues/being mobbed. The question “What could/should you do as an observer?” requires an oral response.
- b) The candidate is requested to go to a machine where a newcomer is waiting to be shown, within a quarter of an hour, how and why a particular task (machining, cooking, sewing etc) is carried out.

### d) Are assessment items representative of the whole occupational profile?

A single practice performance sequence (PP) can never cover the whole profile. The important question is how many PP sequences are required to offer assessment items that are representative of the whole profile.

There is no generally agreed rule. In the end, it depends on the assessment panel to decide what key contents of the occupation must be covered in each and every assessment and how often (in which frequency) other parts of the profile will be addressed. Local market demands may be a decisive factor in the decision making process.

## CONSIDER THIS

### Representativeness of assessment items for the occupational profile

For technical and vocational occupation-related competencies a minimum of two performance sequences should be selected for any occupational profile which defines six or more purely technical or vocational duties. For lower-level occupations in the informal sector, sometimes one duty or 3-4 tasks are sufficient.

For social competencies assessment, panels should count how many tasks require them in the given profile. Based on this assessment, panel members should decide whether a special assessment item needs to be included.

### e) How to select assessment criteria that are objectively verifiable?

Many assessments apply vague assessment criteria such as “carried out properly”, which leave ample room for interpretation by the assessor. A product that is out of tolerance will be rejected by the paying customer, this is a daily experience in the world of work. Both assessor and assessee benefit from objectively verifiable assessment criteria since they enhance transparency and reliability of the assessment. They also allow for self-assessment of the learner prior to the assessment, which is particularly useful in the informal economy where training takes place on the job. Since not all tasks are suitable for objectively verifiable assessment criteria, the following section describes how they can be identified.

## EXAMPLE

The assessment criteria “no visible scratches caused by tap wrench” during the step “fasten the tap” in a plumber test performance provides the candidate a clear image about the conditions for getting marks in this step.

Master craftspersons are usually more at ease in identifying objectively verifiable criteria, hence the need to be part of the test development team. The following list indicates where to look for such criteria. The trick is to (mentally) go through work sequences in search of criteria to be used to distinguish the performances either “fulfilling” or “not fulfilling” the required assessment conditions.

## CONSIDER THIS

### Areas of work sequences that allow for objectively verifiable assessment criteria

**i) Measurable tolerances:** All dimensions for length, temperature, voltage have tolerance limits. They can be described by the desired maximum visible gap estimated with +/- 1mm precision.

**ii) Clearly observable signs or details:** Particular patterns of movement (of hands or arms) or firmness of grip or pressure of fingertips can serve as qualifiers provided they can be clearly observed by the assessor. The firmness of pressure applied to the skin of a client in a beautician parlour can be assessed with a qualifier like “no pain felt by client”.

**Symptoms for defects** (with alarming patterns) can be traced in many situations through direct observation (like e.g. visible colours or changes in colour, smell, noise, surface patterns, contour deformations etc.). Their appearance is easily verified and means that the efforts have been only partly successful.

**iii) Observation of rules:** Work rules and safety hints are important in certain critical situations which means that the assessor has to watch for a particular moment during performance. Instead of the criteria “Observes safety rules” which does not specify when and where and what has to be done to prevent physical hazards or damage to the equipment, the criteria “gloves worn” at a particular moment of a step permits an objectively verifiable decision about “fulfilled or not fulfilled”.

**iv) Checking intended results after a work sequence:** The intended result of a work sequence can often only be checked after a series of activities. The description of criteria for the final (or intermediate) results can serve as assessment criteria. This is why functional checks should be done in the presence of the assessor in order to verify success or non-success of the preceding efforts. For example, the firmness of fixing a wash basin is the result of a whole sequence of preceding assembling steps. Overall success is controlled by the shaking of the appliance by hand after fixing. The simple fact to be observed is, whether the candidate really shook the basin firmly or not and whether the joints did not give way.

**v) Use of special tools that are difficult to use or easy to forget:** The use of common tools does not provide the basis for distinguishing between poor and good performance. Directly observing the handling of tools makes sense for testing only in case there is a real chance that candidates use them in the wrong way or forget their use. So lists of tools may provide qualifiers only if they hint at special tools which are either difficult to use or commonly forgotten.

**f) How can theory test items best be designed?**

Most SICOs conduct proficiency assessments with a clear focus on the practical part, but all SICO examples covered in this guide also include the assessment of general trade knowledge.

The level of theoretical questions differs, depending on the educational level of the candidates. In the case of semi-literate or illiterate candidates SICOs give the option of asking and answering the questions orally. Some even give the opportunity to answer in the local language. Some assessments only cover theoretical questions about technology, others include some issues on marketing and business.

The assessment of master craftsmen (plumbing) in the Democratic Republic of Congo is purely practical while the assessment for navigators is focussing on theory aspects.

While most SICOs conduct proficiency assessments, theoretical topics are gaining importance, as markets and products change and knowledge of products and materials becomes more important. This is illustrated in the following example:

**EXAMPLE**

**Including questions about potential risks of new products used in the occupation**

There has been a growing concern in **Ghana's** hairdressing industry about inappropriate use of cosmetic products. Reportedly there have been cases where customers experienced mistreatment, e.g. products applied for hair bleaching caused skin inflammation and worse. The trade associations became aware that apprenticeship training and the assessment itself must address these issues. Today the assessments entail a number of questions about the use of cosmetic products, the properties and health risks of the chemicals they contain and their appropriate application. Some associations debate about a minimum level of schooling for their apprentices in order to raise the national standard of the profession.

If theory items are covered, the main focus should be to assess more than trivialities. The distinction of several levels of complexity is a tool to avoid the common asking for names. Level 2 is appropriate for the informal sector whereas level 3, trouble shooting, is less common.

**Levels of complexity for theory assessments**

**Level 1:** Isolated pieces of information, e.g. names, lists of types, definitions, wordings of rules/definitions, not application of rules.

**Level 2:** Interlinked pieces of information, like application of rules/concepts, comparisons, and inter-linked processes and functions. A minimum of two concepts is involved.

**Level 3:** Linked information of special relevance like e.g. trouble shooting, faulty components and processes, deals with defect-cause links, symptoms and remedies.

The relevant levels of complexity (1 and 2, or 1-3) should be covered evenly in assessments. Likewise, different types of theory assessments can be combined. No writing is required for any of the following types of assessments. Essay type questions are not advised here because of the subjective nature of assessment of the response, and the often low literacy levels of workers in the informal economy.

**Types of theory assessment items**

- Work sequence items (levels C2 and/or C3)
- Matching items (addressing levels C2 and C3)
- Cause-effect sequence items (either addressing level C2 or C3)

**Type 1: Work sequence items**

The candidate is confronted with a list of work steps, of which the sequential order is mixed up. He has to sort them in the correct sequence. So it is just a *ranking exercise*. Numbers are written in front of the statements to indicate the ranking.

**EXAMPLE**

The work assignment “change wheel of a car” is stated in 10 steps, but in scrambled order. So the candidate has to match the numbers 1 to 10 to indicate the correct sequence.

Task: Match numbers 1 to 10 to the descriptions of the work steps for “Change of car wheel”

- ( ) Tighten the nuts firmly cross-wise.
- ( ) Block/wedge wheels of opposite side of car.
- ( ) Loosen nuts with a spanner (one turn)
- ( ) Lower the car.
- ( ) Place the jack/lift under a solid spot of the car body.
- ( ) Make sure that the jack/lift is in vertical position and on solid ground.
- ( ) Loosen the nuts completely and take them out.
- ( ) Exchange the punctured wheel against the spare wheel.
- ( ) Enter the nuts by hand and tighten them by spanner slightly (until the wheel starts rotating).
- ( ) Lift the car slowly until the wheel is off the ground.

Key: 10, 1, 2, 9, 3, 4, 6, 7, 8, 5

Certain planning abilities and the knowledge of related work rules and safety precautions can be covered as part of the knowledge test.

**Type 2: Matching items**

Special interest should be paid to new matching items. Candidates are requested to establish a relationship between two sets of statements. The shorter set consists of so-called “options”; the longer list of “responses”. “Options” are tools/machines/processes/systems that have a wide range of functions, typical uses, defect symptoms, remedies etc. that go with them. Master craftpersons can draft them easily because they know the relationship between various options and related statements. End-of-apprenticeship assessments can cover up to 4 options with up to 10 matching statements.

## EXAMPLE

Match the tools to the building operation which is most typical for their use

A = Make excavation	1 Trowel
B = Make concrete foundation	2 Wheel barrow with barrel shape
C = Build brick wall	3 Hue and spade
	4 Building line
	5 Motor vibrator
	6 Level gauge

### Type 3: Cause-effect sequence items

This type of item is ideal for measuring abilities in logical thinking and functional understanding.

Three statements describe either causes or effects (defects). These statements are mixed up in their logical order and the candidates must find the correct order.

## EXAMPLE

The general rule for arranging the statements of cause - effect is: "cause on top, effect/defect below"

Task: Find the cause-effect sequence and enter the letters into the response sheet!

(A) = Plants grow faster (B) = It has rained (C) = Farmers' income risen

Response: ( )  
( )  
( )

The key would be: B A C (Rain causes faster growth of plants which may cause a rise in farmers income).

**g) How can generic competencies be covered in assessments?**

Assessments can also include generic competencies. This section provides examples how certain generic competencies can be integrated into all types of assessments.

There are two competencies that could be added easily

1. *Ability to plan work*

Employers know how important it is that workers plan their own tasks and collect the necessary tools and materials without being told in detail.

Before a performance test, candidates can be asked to describe the tools and materials they will require. Like this, assessors can evaluate the candidate's competency in planning. The enhanced version would require the candidate to explain or write down a brief job sequence for their practice work before they start working (highlighting critical steps and safety precautions).

2. *Ability to assess own performance*

The better employees recognize their shortcomings the more likely it is that they improve. After completing the practice assessment, candidates can be asked to self-score some evaluation aspects of the tasks they performed. This will demonstrate the candidate's awareness of their own performance.

### EXAMPLE

In **India**, LabourNet in Bangalore is an initiative of MAYA (Movement for Alternatives and Youth Awareness), a non-governmental organization. LabourNet is not a member-based organization but operates as a social enterprise that creates services and sustainable benefits for workers in the informal sector, comparable to a small industry organization. It offers a platform to access services, provides financial inclusion, and social protection and welfare services. It seeks to build capacities of workers, and markets their services to customers. LabourNet chose to develop assessment tools for four construction trades namely: masonry, carpentry, painting and plumbing.

LabourNet relied on a team of industry experts, vocational training experts, instructional design experts, content writers, and assessment experts to ensure assessments measured the competencies deemed relevant to a specific trade. It conducted assessments through outsourcing assessment delivery to a professional survey agency. Under this model, labour coordinators worked to raise awareness of the programme, and helped recruit participants. Assessments were then conducted on site through questionnaires delivered by experienced survey professionals, with completed tests then evaluated centrally by industry experts. This model has allowed it to strike a balance between assessment expertise and industry expertise without exceeding resource constraints.

Completed assessment tests were then sent to the survey company's office where they were photocopied and the original sent to LabourNet's offices for evaluation. A process which took about 4 days after which a report card was printed and couriered to workers. The results were communicated to labour coordinators who then advised workers accordingly and/or invited those with low scores for further training as and when such courses were available. Report cards were delivered to workers two to three weeks after they had taken the assessment.

### 3.3.4 Regular review of assessment items

All SICOs carrying out skills assessment report that they regularly change and review the assessment items. The SICO from Djougou (Benin) pays attention to the profitability that the selected assessment item might have on the market. GIPA in Cameroon tries to include a new assessment item each year which reflects the changes in technology. APSKI, the plumbers association in DRC, together with the training centre organizing the skills upgrading and assessment, update the items according to the new demand for modern plumbing.

The review of assessment items should reflect:

- change in technology
- new materials on the market
- change in customer taste
- new standards regulating a trade — e.g. environmental standards.

The collaboration of SICOs with external research and certification institutes is particularly important when international standards are to be applied. Some SICOs collaborate with international suppliers for updating their training curricula for skills upgrading and for reviewing their assessment items.

## 3.4 Setting up the assessment panel

The assessment panels are usually composed by members of the association and, to varying degrees, by several other representatives, like:

- line ministries responsible for trade test,
- municipalities, local NGOs, or
- representatives of a training centre.

As far as the master craftsmen are concerned, work experience and a proven reputation are indispensable. In Benin, a master craftsman elected in the assessment panel must possess at least 5 years work experience (as master craftsman) and must be an “honourable person”.

### CONSIDER THIS

#### Job profile of assessment panel member

- ☑ Demonstrated competency in the skills to be assessed, evidenced by local community recognition
- ☑ Commitment to the assessment process by demonstrating regular availability of qualified business staff for meetings and assessments
- ☑ Personal integrity to ensure transparent and credible processes
- ☑ Good mastery of language to be able to rephrase text passages or formulate new assessment items

The following table provides examples on the composition of assessment panels.

Table 2.

	<b>GIPA (Cameroon)</b>	<b>APSKI (DRC)</b>	<b>Multi-trade SICO Bembereke (Benin)</b>
Type of panel/ committee members	Assessment panel	Assessment panel	Organizational committee that selects the members of the assessment panel
	<ul style="list-style-type: none"> <li>• Master craftsman</li> <li>• At least 3 persons representing partners (international cooperation, NGO, Government)</li> </ul>	<ul style="list-style-type: none"> <li>• Master craftsman</li> <li>• Representative(s) of Government</li> <li>• Representative from training centre</li> </ul>	<ul style="list-style-type: none"> <li>• The chairman of the SICO</li> <li>• The secretary of the SICO</li> <li>• 3 other members of the SICO</li> <li>• Persons in charge of training of each association</li> </ul>

In some cases the members of the panel are proposed by the SICO leadership or they are selected by an additional organizational committee as is the case in Benin. This committee oversees the assessment programme, sets the assessment standards, and eventually organizes the assessments. But generally speaking, it is good practice if members are elected in a fair and transparent procedure. The membership in a panel should not be permanent but allow for a healthy degree of rotation, e.g. members being elected annually through a democratic process.

Why rotation is important:

- Transparency and credibility, avoiding favours
- Bringing in new expertise

Some SICOs have the rule that a master craftsman, if his/her own apprentices are among the candidates, cannot be part of the assessment panel.

It is important that assessment panels function on the basis of set rules and regulations. The role of such a panel is to oversee the assessments. The assessment itself has to be done by persons with an expertise in assessment (an assessor) or their expertise has to be developed. This might involve preparatory trainings to the new master craftsmen selected as assessors.

## CONSIDER THIS

### Checklist for setting up an assessment panel

- Set up rules and regulations for the assessment committee — e.g. define for how long a person can serve on the panel
- Set up criteria for selecting committee members and make them transparent to SICO members
- Select the committee members — identify and invite reputed master craftsmen (trade experts)
- Orient and train the committee members: organize an orientation session where you elaborate on the criteria and the procedures for assessing apprentices

### 3.5 Organizing the assessments

#### *Registration for assessments is in most cases organized by the SICO*

SICOs need to decide if assessments are only for members or apprentices of members (as is the case in Ghana) or if other tradespersons can participate, too. If access to skills assessment of apprentices is not restricted, SICOs need to consider if the master craftsmen's consent is required to register an apprentice.

The **timing of the assessments** depends on the target group. For apprentices the skills assessment takes place at the end of the apprenticeship period. Some SICOs conduct additional mid-term assessments so as to better enable apprentices to self-evaluate performance and to give feedback to master craftsmen on the performance of the apprentice. According to SICO representatives this practice helped to improve quality of apprenticeship and to reduce the failure rate.

In the case of training of workers/master craftsmen the assessment is often conducted after completing some skills upgrading. In the case of APSKI (plumbers association South Kivu, Democratic Republic of Congo) the assessment is conducted in three stages: at the beginning of the training (as an entrance requirement to the skills upgrading course and for determining the skill level of a person), after each training module and at the end of the training. The badge of the association is only given to members who have been successfully upgraded and tested.

The organization of the place for skills assessment depends largely on the trade, the specific context in which a SICO is operating and the stakeholders involved.

Practical assessments usually take place in a workplace environment to best simulate real work situations. This helps apprentices feel at ease. Assessments could take place in workshops of selected master craftsmen or for instance on construction sites. On site assessment is applied in both case studies in India and Bangladesh. The assessors have to follow the apprentices to the site. Assessments of skilled workers or master craftsmen are also being conducted at training centres. In a few cases SICOs operate in their own training facilities which are used for assessment.

Performance criteria can be distinguished into process and product criteria. Process criteria are always assessed during the practice performance, e.g. if a certain tool has been used, whether the firmness has been tested, etc. Product criteria are usually evaluated after the test with or without the presence of the candidate, e.g. if a certain appliance has been fixed within a +/- 1mm variance, if a water tap is dripping or not. If need be, the assessor asks the candidate to stop the practice performance before moving to the next step so that specific product criteria can be observed. Different difficulty levels can receive different weights and thus be graded with more or less marks.

The theory test may be carried out in a meeting room of the SICO, a room at municipality or a classroom in a training centre.

The duration of assessments differs from one trade to the other. One practice is to conduct all assessments in all branches on the same day, so as to be able to use the same assessment items and to compare results.

## EXAMPLE

The multi-trade SBO of **Kandi** (Benin) uses a uniform scoring system; i.e. for all trades the same minimum score has to be reached to pass the test. How to accomplish this differs, however:

For tailors the test items are split up into smaller sub- items like collar, sleeve, pocket, etc. whereas each part can get scores (e.g. an apprentice may score low in some sub-items but can still pass if he/she shows good performance on the most difficult parts).

The case is different in welding where tasks are sequenced and built on each other. The assessment committee has decided if an apprentice fails in drawing a door he/she will fail in the entire test (this is because the task of drawing/designing is considered crucial).

Usually candidates have to produce/accomplish a test item in a given period of time. The importance given to timely accomplishment of tasks seems to differ from one trade or SICO to another. While some are strict on the timing others are less. In electronics (TV repair, ITC hardware) or car repair, apprentices are given a flexible time to accomplish a task while tailoring and carpentry is using a strict time scale. In the former trades the SICO says it is more important to detect the problem and find a good solution than testing the ability of a candidate to work fast.

## CONSIDER THIS

### What to do when people fail assessments

The experience of SICOs carrying out skills assessment confirms that failure is frequent. In DRC, where the assessment started recently, 54 plumbers have sat for the assessment up to now: 36 passed, 18 failed the assessment. In **Djougou** (Benin) where the assessment is carried out since 2004, 1775 persons succeeded and 806 failed. GIPA in Cameroon has been carrying out skills assessment for 12 years now, 492 persons have been tested; it seems that only few failed. In 2011 out of 25, 3-4 failed.

Failure is a heavy psychological burden – for both the apprentice and his/her family and for the master craftsperson who trained the apprentice. Therefore is it useful to elaborate methods to mitigate failure in skills assessment:

**Be aware:** The agreed upon standards (assessment criteria) should not be diluted for the purpose of avoiding failure, as this may be counter-productive for the improvement of trade standards and quality. However, you may evaluate whether the criteria are relevant for the market (or whether you have gone too far, i.e. setting the standards too high).

## CONSIDER THIS

### What to do to mitigate failure

**Make master craftspeople carry out pre-testing**, instead of them sending their apprentices directly to the assessment. There are several examples for this practice: In **Ghana** the hairdressing SICOs conduct pre-testing at mid-term of the apprenticeship so as to measure the learning progress. In **Djougou** (Benin) the master craftsmen conduct pre-testings with their apprentices. In **Kandi** (Benin) master craftsmen send their apprentices to crafts-colleagues to get pre-tested. GIPA recently introduced pre-testing after having noticed that master craftsmen send their apprentices too soon to the assessment.

**Give the possibility of upgrading information to master craftsmen.** The SICO could organize upgrading sessions for interested master craftsmen. Master craftsmen have an extremely high interest that their apprentices don't fail as this means a real loss of reputation for them. In **Kandi** (Benin) MCs go around to see colleagues and try to get informed about topics that their apprentices ask them (and they are not able to answer).

**To give an open choice for assessment items.** In Cameroon, craftspeople try to convince GIPA to give the choice of two assessment items to the apprentices (not just one).

**If possible: don't publish the names** of apprentices or master craftsmen who failed. It is hard enough for people to have failed, it is not necessary to make it public.

**Provide second chances and do not dramatize failure.** There are many reasons why a candidate may have failed. Everybody who failed in an assessment should receive a second chance.

### 3.6 Organizing certification (community/municipality involvement)

In informal apprenticeship it is common that a master craftsman's duty (and income generating activity) is to "release" the apprentice in a more or less public ceremony<sup>5</sup>. While these traditional ceremonies are an important milestone for a graduating apprentice they also tend to be exploitative because they are expensive for the apprentice and often prolong an apprenticeship.

Once the assessment is conducted by a SICO it is no longer the individual master craftsman's sole responsibility to release the apprentice. The traditional ceremony is often replaced by a more formal function of handing over the certificate, which involved all main stakeholders. In the present system in Benin (EFAT) the certificate is signed by the municipality and the SICO. In Kandi the results of the exam are also published by the municipality, so that everyone can see who passed the assessment and with which score. This gives pride to the families of those apprentices who performed well (but it is a shame for those who did not). In the example of the DRC, the plumbers continue with the custom of the master craftsman receiving a goat. The oldest plumbers even continue giving the "plumber's key" to their apprentices as they say: it's a golden rule and without it the apprentice will never succeed.

5. This practice is common in many West African countries but may not be practiced in others. In Nigeria, where apprenticeship in the metal fabricating businesses can last up to 5-6 years, the graduation ceremony entails the slaughtering of a goat and the handing over of an essential piece of equipment to the graduating apprentice, which is meant to enable him/her to start his/her own business. In the DRC, plumbers used to hand over a "plumber's key" as a sign that the apprentice is now able to work as a plumber.

## EXAMPLE

In **Cameroon**, the multi-trade association GIPA organizes a large and celebratory ceremony at the Chamber of Commerce: “All parents are invited and the items produced during the skill testing are exposed there. The Ministry of Small Industries signs the certificates and it is the Minister who hands over the certificates in a public function covered by the media” (source: interview with leadership of GIPA).

In the **DRC**: “The navigators’ graduation takes place in the graduation hall of the accredited training centre that organizes the skills upgrading. The ceremony is a public affair. The captains and subordinates wear their respective uniforms, the certificates are handed over by the port authority”.

Source: interview with ANMACO.

From the practical examples above we can summarize the following recommendations:

- In contexts where public graduation ceremonies are common practice they should be maintained, unless they entail high costs for the graduate as is the case in some West African countries.
- Community involvement in certification ceremonies enhances skills recognition of successful candidates. The participation of community representatives like chiefs, majors and other respected community members further reinforces the official character of the ceremony, raises public attention and enhances the skills recognition of successful candidates.
- Keep in mind the important role of the master craftsperson not only in training of apprentices but also as a mentor for the graduated apprentice. He/she should continue to participate in the graduation ceremony and co-sign the certificate.

### 3.7 Financing the assessments

Organizing and conducting skills assessment by a SICO involves costs such as:

- a. Costs for designing the assessments. This can include the cost of a DACUM expert, workshop expenses such as the participation of practitioners and stationary
- b. Cost of promoting participation in assessments, publishing and distribution of agreed standards
- c. Cost of developing assessment tools
- d. Training of assessors (if the service is not provided voluntarily)
- e. Cost of conducting assessments including material, rent for the place (if needed), fees for assessors and/or panel members, certificate
- f. Costs for graduation ceremony by the SICO.

The fees charged by the SICO are supposed to cover all costs related to the assessment. Often, NGOs or development partners cover aspects a-d, while e, the cost of conducting the assessment, and sometimes f, is paid by the one to be assessed.

Most SICOs see the assessment as an opportunity to earn some income.

The cases below show that costs of assessment can differ substantially, depending on the trade, the extent of assessment and the pricing by the SICO.

## EXAMPLE

In **Kandi** (Benin) the SICOs charged 5000 FCFA (7,60 €) for the assessment. This amount was subdivided between the assessment committee, the national associations and the SICO leading the procedure (collectif). Today, apprentices have to pay 5000 FCFA for the certificate (produced by Government) and 5000 FCFA for assessment materials. In **Djougou** (Benin), the costs are substantially higher. It costs 8000 FCFA for registration to the assessment and 20 000 FCFA for receiving the certificate (all trades). The apprentices bring their own material. According to the SICO the reasons are: higher administration (costs for IT based data banks) and the costs for machinery and energy.

In **Cameroon**, GIPA charges a uniform rate of 50 000 FCFA (96 US\$) for the assessment. According to the SICO more than 75 per cent of the rate covers materials (like wood or cloth) and machinery (energy, depreciation) for the proficiency assessment.

In **Ghana**, the hairdressing SICOs used to charge approx. 35 GHC (approx. 14 US\$) for their own administered proficiency assessments. Fees for National Trade test are charged directly by the national authority, but the SICOs organize the registration. The costs for trade test are approximately twice as much as for proficiency assessments. According to one SICO there are discussions about a substantial increase of the charges (to approx. 200 GHC) because of the costs associated with more sophisticated assessment. The SICOs argue that the costs for assessment are too high for their members and apprentices.

If an assessment is conducted together with municipalities or state authorities the SICO should receive a fair share of the income. If the assessment is conducted by a national authority, the SICO has usually no means of influencing the price. But, as the examples show, the SICOs have some means of lobbying for adequate pricing of skills assessment with national authorities.

The fees charged for skills assessment can become a barrier for poor apprentices. It basically becomes a cost – benefit calculation for the apprentice: what are the gains holding a certificate (socially, economically) vs. the costs incurred. In Ghana, as mentioned elsewhere in this guide, the demand for apprenticeship has been declining in some trades because of the high competition in the market and the low income. If job opportunities and chances for business start-ups are poor, apprentices may opt against a assessment that they consider too expensive. The same applies to master craftspersons, who have to see the cost-benefit of “being tested”.

## 4. Stakeholder involvement

### 4.1 Overview

In summary the reasons for involving stakeholders are the following:

- To improve public and community recognition of the assessments and certificates;
- To receive methodological support on how to best organize the assessment, therefore improving the quality of the assessment;
- To ensure transparency of the assessment process.

The following table provides an overview on stakeholder involvement (internal and external) according to two different cases: the assessment of apprentices and master craftspersons.

Table 3.

Activity	Stakeholders involved			
	Assessment of apprenticeships		Assessment of MCs	
	Should be involved	May be involved	Should be involved	May be involved
Defining assessment criteria	Member MCs	External trade experts (Accredited) Training institutions National authorities (for national level assessments)	Member MCs External trade experts (Accredited) Training institutions	Assessor accredited by state authority
Assessment committee	Member MCs selected as assessors	Assessor accredited by state authority (Accredited) Training institutions Representative stakeholder from community, municipality	(Accredited) Training institutions Member MCs or external MCs selected as assessors (e.g. expert MCs who have conducted upgrading)	Assessor accredited by state authority
Conducting assessments (place)	SICO Workshops of MCs	Suitable companies Training institutions	SICO Workshops of MCs	Suitable companies Training institutions
Certification ceremony	SICO representatives (local) MCs Community representatives	Municipality National authority	(Accredited) Training institutions Representative stakeholder from municipality or State	Technical representative stakeholder from National Authority

## 4.2 Involvement of master craftspersons

### *Assessing apprentices*

*“Master craftspersons know their trade and the market best and they also know what apprentices should be able to do. They just never have done any formal assessment...”<sup>6</sup>*

#### CONSIDER THIS

**In skills assessment of apprentices, master craftspersons are the key stakeholders as their expertise and ownership is crucial for the functioning and sustainability of the assessment scheme.**

- They are the best resource for selecting and defining assessment items
- They should participate in the assessment committee and/or act as assessors (However, note that a master craftspersons should not assess his/her own apprentices!)
- If possible, they should co-sign certificates

**It is therefore recommendable that their status and ownership is maintained when assessment systems are being formalized.**

### *Assessing master craftspersons and workers*

In the case of assessment of master craftspersons, their own engagement in the selection and design of assessment items is somehow limited (as they themselves are the target group of the assessment). The members of the SICO should be involved in setting trade standards and possibly in the formulation of assessment criteria. However, the actual assessment should rather be done either by external assessors (technicians or master craftspersons from other regions - not from the community) in order to avoid potential bias. If master craftspersons are involved as assessors there must be a fair and transparent selection process.

## 4.3 Involvement of external stakeholders

The involvement of external stakeholders such as community representatives, trade union representatives, municipalities, training centres and national authorities for trade test depends on several factors:

- the skills assessment model and its target group (assessment of apprentices or workers/master craftspersons)
- the nature of the trade (some trades work under close supervision of authorities and require licensing while others do not – this also depends on legislation)
- the scope of certification (local, national, international).

6. Quote from a SICO in Benin.

## EXAMPLE

In **Colombia**, COV cooperates with a national research institute which acts as an external certification authority that oversees the certification (labelling) of mine workers according to the mutually agreed upon quality standards. The institute is involved in the entire assessment/quality assurance process including the definition of production standards and quality criteria (as it is not the skills that are tested but the production process as a whole as well as the quality of products) and regularly conducts control visits to mining sites on behalf of COV for ensuring that the standards are implemented and maintained.

### *Involvement of municipalities and other public institutions*

The involvement of municipalities in the process of skills assessment is not common in all cases and depends on which role municipalities play in the governance system. In Benin decentralization is advanced, which is one reason for the strong involvement of municipalities in skills assessment of apprentices. Another reason is the extent to which informal apprenticeship assessment has been formalized in Benin.

After decentralization in the mid 1990s, municipalities were seen as local partners of SICOs in the whole apprenticeship assessment scheme. The national Confederation of craftspeople, CENAB, together with international cooperation, was supporting the involvement of municipalities. In the beginning this model was tested on a smaller scale, but is now planned to be introduced to the whole country (presently, five departments work according to this model). Some core features of this cooperative model with municipalities are presented in the box below.

## EXAMPLE

### **How municipalities can be involved in skills assessment – the case of Benin**

There are three municipality decrees which govern the system for skills assessment:

The **first decree** describes the ‘obligation’ of master craftspersons to “have their apprentices pass the assessment”. Otherwise they are not allowed to give any end of apprenticeship certificate to their apprentices.

A **second decree** installs a “committee for organization of end-of-apprenticeship skills assessment”. This committee is composed of the Chairman, the secretary and three other members of the executive bureau of the multi-trade SICO as well as the representatives in charge of training of each association. This committee has the task to organize the whole assessment process, to accredit the members of the assessment panel and to co-sign the certificates with the master craftspersons.

## EXAMPLE (cont.)

A **third decree** installs an “advising local committee” that is composed as follows:

- The mayor of the municipality or his representative
- A representative of the parents of apprentices
- The secretary of the executive bureau of the multi-trade SICO
- One representative of an NGO
- One representative of the local development association of municipality

The general task of the advisory committee is to support the skills assessment committee in organizing its activities, for instance by helping to establish public or private partnerships, finding resources, monitoring apprenticeship training and helping to organize the assessments. While in the past the skills assessment was conducted only by the master craftsmen appointed by the SICO, the assessment is now conducted by a panel consisting of the SICO representative, an accredited assessor from a training centre and a municipality/community representative<sup>7</sup>.

One motivation for municipalities to participate in assessment and certification may be linked to an interest in increasing tax revenue, but also to introduce quality standards in the small scale industries. SICOs are their ideal partner, as they represent the interest of a trade towards authorities. By introducing skill standards they can bring “order” into an otherwise unorganized sector. Overemphasizing a municipality’s control function, however, might also become an obstacle for effective skills assessment.

The cases provide a number of examples where SICOs collaborate with public institutions (other than municipalities) in the implementation of skills assessment at the local level. The collaboration may be by choice or it may be compulsory. GIPA in Cameroun regularly invites the Ministry of Small Industries to send a representative for the assessment, not as an obligation but as a way to promote ownership of the Ministry into the assessment scheme. Some trades are subject to state regulations – like transport businesses or trades which may pose risks to consumers (e.g. production and preservation of food items, electrical installation etc.) In these cases it is obligatory that the SICO organizing the assessments involves the respective authorities. In the case of skills assessment of navigators (South Kivu, DRC) the process of assessment is supervised by the port authority.

7. There is no independent report available which evaluates the advantages and disadvantages of “assessment committees” which involve community representatives as “non-technical” persons.

## CONSIDER THIS

The collaboration with local authorities in the assessment process, if not compulsory, has a number of advantages (e.g. adding “recognition” to a SICO certificate; utilizing the authorities’ expertise in designing and conducting assessments) but it may have negative side effects as well. The most significant one is: master craftspersons may be gradually replaced in the assessment panels by public figures, with the following possible consequences:

- The master craftspersons’ expertise is gradually lost
- The SICO members may lose ownership (see more under section constraints)

One way to mitigate the risk of “being side-lined” is to install a strong monitoring function of SICOs to oversee the functionality of the assessment scheme. The stronger a SICO is, the better it can manage a balancing of interests between state and municipal authorities (with their tendency to “control”) and the interests of their members (master craftspersons) and apprentices. GIPA, the multi-trade association from Cameroon, was outspoken on this topic: “when it comes to our skills assessment system public authority has to consider our points of view, otherwise it will not work.”

### *Cooperation with technical training institutions*

The cooperation of a SICO with an accredited technical training institution is beneficial if a SICO links assessment with skills upgrading and/or if a SICO does not have the capacities to conduct assessment (and/or skills upgrading) on her own. As the examples from the DRC show, the cooperation becomes compulsory if a SICO, because of government regulations, is not permitted to conduct assessments.

## EXAMPLE

In the **DRC** a SICO is not permitted to conduct assessment and issue certificates unless an accredited technical training institution (TTI) is involved. In the case of certifying master craftspersons there has to be an upgrading course – to be conducted by the TTI - before assessment. The upgrading course is meant to ensure that candidates have reached a certain uniform skills standard.

Both the plumbers’ and the navigators’ association in the DRC cooperate with an accredited TTI. The training institution conducted a training needs assessment together with the SICO and developed upgrading courses in consultation with state authorities and the SICO. The assessment criteria and assessment items had to be approved by state authorities. The skills upgrading and the assessment is then conducted in a tripartite set up: the SICO, the state authority and the TTI.

As stated before, master craftspersons tend to accept assessment only if: (1) it is linked to skills upgrading; or (2) if it is obligatory to run a business; or (3) if it provides access to higher level certification. In some cases SICO themselves organize and carry out upgrading courses and assessment, but in others the SICO cooperates with an accredited technical training institution. The three examples below illustrate how upgrading and assessment can be organized in collaboration:

- COTRAF-construction (Rwanda) cooperates with an international agency and the local association of private training providers who have the expertise and the capacities to set up a training programme for skills upgrading. The curriculum for skills upgrading and the assessment will be designed according to specific occupational profiles developed for the construction industry.
- In the case of navigators in the DRC the skills standards are guided by state regulations. They have to cover all basic skills and technical knowledge of the occupation. The skills training conducted prior to the assessment uses a comprehensive curriculum that ensures all candidates reach the skills standard. ANMACO, the navigators' association cooperates with a training centre that organizes the skills training and assessment. In the course of the cooperation the most qualified navigators have become technical trainers in the TTI (on contract), while the national authority has seconded an expert (the Commander of the Port) as a lecturer on all aspects of legislation.
- APSKI (association of plumbers in South Kivu, DRC), only assesses the skill areas which were subject to skills upgrading. The SICO cooperates with the TTI in a similar way as the navigators: the most knowledgeable plumbers (master craftspersons) are selected by the SICO as practical trainers for skills upgrading, while some aspects (e.g. trade theory) are provided by TTI instructors. The assessment is conducted by an assessment panel consisting of a SICO representative, instructors from the TTI and technicians from the responsible line Ministry. (It is interesting to know that six candidates of the first round of upgrading and assessment were above 65 years of age, one of them was 80 years old).

In the case of assessment of apprentices, the cooperation with training centres is less common, as the master craftspeople themselves are the most important resource for designing and implementing the assessment scheme.

In a few cases SICOs run their own training programmes or operate a training centre (e.g. hairdressing SICOs in Ghana). The training centres of GHABA and NABH conduct preparatory classes of four months for preparation of national vocational training institute (NVTI) trade tests and conduct pre-testing. NABH has recently introduced courses for the international “city and guilds” certification.

### ***Linkage with national authorities for skills assessment***

Once the skills assessment of a SICO is to be linked to formal national qualification frameworks, the collaboration between the SICOs involved in assessment and the national authorities is a necessity (see next section “Linking skills assessment by SICOs with formal qualification systems”).

## EXAMPLE

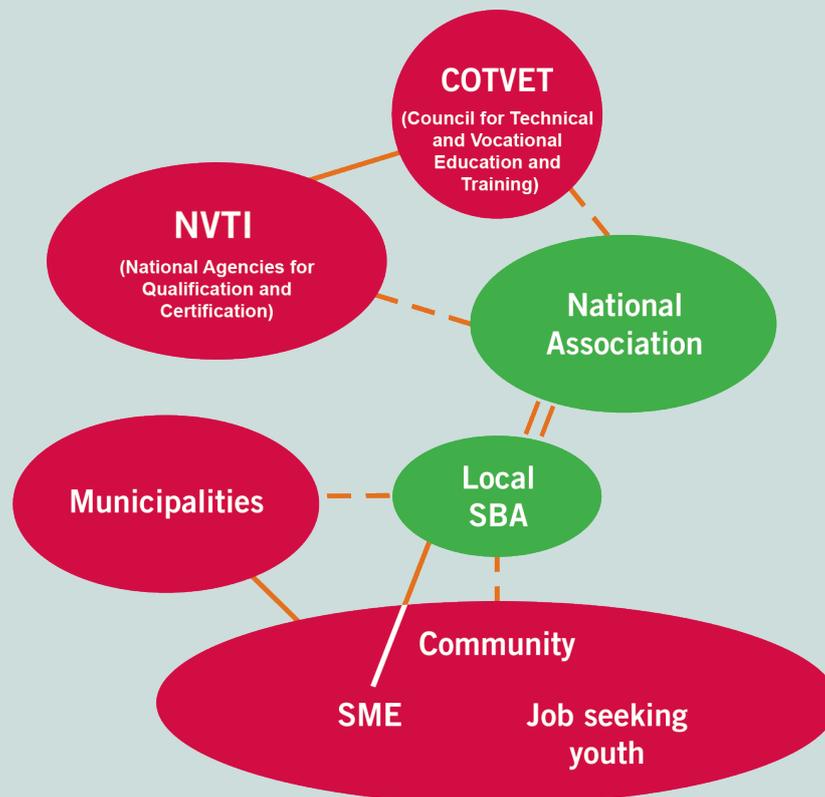
In **Ghana**, one of the hairdressing associations collaborated with the national skills authority NVTI in two different areas:

- In receiving initial assistance for designing the SICO skills assessment scheme and in using public assessors for conducting assessments (together with master craftspersons).
- The SICO participating in an expert group for updating/preparing national curricula for trade test by NVTI. In the next step the SICO has been proposing master craftspersons who will be selected by NVTI collaborates as assessors for the public trade test scheme.

The example shows that collaboration can be in two directions: (a) national authority assists in establishing/improving a SICO skills assessment scheme or (b) the SICO participates in development/revision of trade test at national level.

The following figure provides an example of the relation of a SICO in Ghana to local and national stakeholders.

Figure 4. Stakeholder landscape (example Ghana)



## 5. Linking skills assessment by SICOs with formal qualification systems

Formal systems for skills recognition increasingly recognize skills acquired in the context of informal apprenticeship or simply by “learning by doing”. As mentioned above, even the conventional systems for trade test, often introduced during colonial periods, have had an element of “skills certification for all”, i.e. assessing skills according to competence, regardless of where these skills have been acquired. These systems, however, have a number of weaknesses such as:

- Assessment practices place a higher emphasis on “skills trained” (curriculum) including trade theory, rather than skills demanded in the market.
- Entry barriers: The assessments contain too many topics of general education. Hence, for enrolling and passing an assessment a certain level of education is required which many people who learn and work in the informal economy do not possess.
- Many assessment items are out of date with the market and lack regular updating.

Modern competency based systems of skills acquisition and assessment need to create a better linkage between skills acquired in the market and the certification system. Achieving this remains a challenge, as the two worlds (technical and vocational education and training and the world of work in the informal economy) are often far apart. SICOs play a key role in building a bridge between informal “skills certification” in the market and the system of formal skills recognition.

### EXAMPLES

Trade associations in **Ghana** for instance have been cooperating with the NVTI in developing a curriculum and assessment items for informal apprenticeship that is aligned to national standards. Furthermore, the associations have designed bridging courses for those apprentices who have passed the proficiency assessment and who want to proceed with a higher level of trade test. The association obtained further expert inputs from international suppliers of cosmetic products - which provided essential information for updating curricula for skills upgrading and for updating the assessment items. Recently, trade associations have become involved in defining national standards for Competency-based Training (CBT).

In **Bangladesh**, assessment panels include a representative of the Ministry for Non-Formal Education, and contracts are registered with the Ministry of Employment and Training. There are plans that apprentices will be assessed according to the National Technical and Vocational Qualification Standard (NTVQF) in future.



The following models for linking skills assessment by SICOs with formal systems for skills recognition have been identified:

1. **SICOs preparing apprentices or members for nationally recognized (formal) trade test examinations.** In this case they cooperate with the national authority in the following fields:

- Conducting so called bridging courses for preparing members/apprentices for national trade tests. Curricula for such courses may be jointly developed with national authorities or the SICO uses/adopts the national curricula.
- The SICO organizes trade test on-site, the assessments are conducted by officially appointed assessors, assessment items are determined by the national authority.

2. **Assessment of apprentices conducted jointly by SICOs and national authorities:** Core of this model is a certification mechanism that is jointly developed and conducted by SICO as representatives of the informal and formal economy and the national authorities. This model is anticipated in several TVET reform processes where SICOs are supposed to be key stakeholders in the national certification system as in Benin.

3. **For both apprentices and craftspeople: SICOs linking their skills assessment/certification with international bodies:** some SICOs want to prepare their members for international trade and/or labour mobility and thus cooperate with international institutions for certification, like the London based City and Guilds. As described under 1, the assessments are conducted by the certification body of the respective institution (not by the SICO). The role of the SICO is to market the scheme among its members and to offer preparatory courses.
4. **For assessment of craftspeople: SICOs cooperating with accredited training centres** for both skills upgrading and conducting trade test which provide craftspeople an accredited, nationally recognized certification.

With respect to the reform of national qualification and certification systems, the following can be recommended:

- Recognize assessments conducted by SICOs as an integral part of the national qualification system and create equivalency with existing qualifications, thereby allowing access to further training;
- Support providing bridging courses with and by SICOs to enable access to further training and qualification for apprentices;
- Use the capacity of SICOs in designing/reviewing national skills standards and assessments as they know well what the market requires.

## 6. Some important constraints and how to deal with them

Skills assessment in the crafts sector is a relatively new development. New ideas always pose challenges which are amplified if new ideas collide with longstanding tradition.

When talking about constraints, it is necessary to highlight the differences between skills assessment of apprentices and skills assessment of master craftsmen or workers. However, in all cases it is mainly about “balancing” divergent interests or contrary effects:

The interest of apprentices to get tested for the certificate	↕	The fear of the master craftsmen his/her apprentices could fail, causing loss of reputation for him/her in return
An increased interest in apprenticeship because of the prospect of certification	↕	The interest in learning and working in a trade not being genuine
The interest of workers to advocate for better wages	↕	The reluctance of employers to pay minimum wages
An elaborated system of assessment with transparent procedures of assessment item selection (costly)	↕	A less structured system that may give room to “cheating”
The ownership and traditional role of the master craftsman	↕	The loss of influence of the master craftsman and takeover of ownership through authorities

There are a number of challenges and constraints linked to the organization of the assessment and the process in itself. Not all of them can be foreseen or dealt with in the context of this guide. Priority is therefore given to the following three key challenges:

Figure 5.



## 6.1 The fears of craftspeople

As mentioned before, there is considerable fear of master craftspeople that their apprentices might fail the assessment. Failing would mean for the master craftspeople loss of professional reputation, credibility in the community and, resulting from that, loss of apprentices and income. There is much at stake and the master craftspeople's fears need to be taken seriously.

The second challenge is connected to their own assessment: master craftspeople in many cases can hardly imagine being tested. They may argue that their knowledge is sufficient and that assessment is not necessary. This becomes a strong argument for reluctance considering that they are training apprentices: failing in their own assessment would mean that they are not competent enough to train others.

There is also a realistic fear of losing money. This will be likely in two scenarios:

1. Where master craftspeople have been asking for considerable amounts of money for the end of apprenticeship ceremonies – once this ceremony is replaced by an official function, the income is lost.
2. Assessment may be expensive for an apprentice, he/she may be reluctant to pay apprenticeship fees (but it is also possible that after paying the master craftspeople apprentices may not be able to pay for the assessment).



## 6.2 The advantages and risks of formalizing the SICO skills assessment

The advantages of formalizing skills assessment in the informal economy are obvious:

- Setting of national skills standards facilitate labour mobility
- Local industries can become more competitive
- The skills assessment system's fragmentation (each SICO having its own standards) can be overcome
- Certification receives higher recognition and credibility

On the other hand, formalizing an otherwise informal system always comes with several risks:

- The more the procedure is formalized, the more ownership may be shifting from the SICOs towards authorities. The signature on the certificates is already an indicator; the mayor or another official person might replace the master craftsman's signature.
- In more formalized systems the assessment committees start to be composed by public figures like the mayor's representative, a technical trainer from a training centre and a representative from community, while master craftsmen become more side-lined. This way they tend to lose ownership and furthermore, the committees lose expertise.
- Assessment procedures may become too complicated for SICOs to handle. This is the case for Benin where, through a series of decrees of the municipality, several committees have been established with detailed task descriptions which seems to complicate the process of assessment.
- The shift to a formalized system may side-line the "average apprentice" who may have dropped out of school at some stage and cannot fulfil the educational or other formal requirements. For instance, a missing birth certificate can be a serious obstacle to getting registered for an assessment.

### EXAMPLE

In **Benin**, the current system of end of apprenticeship assessment, jointly conducted by SICOs and municipalities, is going to be further reformed. Interviewees from SICOs have stated the following risks and challenges:

- local SICOs may lose influence and ownership in the process if the authority of governing the system will be centralized through the respective line ministries and CENAB, the national confederation
- a uniform duration of apprenticeship (three years) for all trades as proposed does not consider the different learning requirements of trades (e.g. a dressmaker in informal apprenticeship may graduate in two years while an auto mechanic needs four to five years to be competent and start to work as a self-employed journeyman/women). The same assessment standards for the entire country would disregard regional differences, although these are important for business and employability.

## 6.3 Economic interests of employers vs. expectations of employees

A primary interest of a worker to certify his/her skills acquired in informal apprenticeship or on-the-job is twofold: (1) earning higher wages; and (2) being more competitive in the labour market against persons who are "fake-professionals".

Employers might not share the same idea and can even react in a contrary way by laying-off these better qualified workers because of labour costs (as it is a common practice in the construction sector). Trade Unions (like COTRAF Construction in Rwanda) come into play to defend workers' rights. It will be interesting to see how, by qualifying and certifying workers, a win-win situation can be created for both sides.

## EXAMPLE

### Navigator's association ANMACO How the introduction of standards through skills assessment can produce manifold effects

The case study of the navigators on **Lake Kivu** (DRC East) shows a range of effects that skills assessment can produce. On Lake Kivu, rules about who could operate a ship on the lake were no longer respected. The result was that frequent accidents happened with heavy losses of life and goods. When navigators were presented with the idea that they could be upgraded in order to respond to existing state regulations of navigation, they immediately adopted the idea. The ship owners agreed on it, too, as they realized that this could prevent considerable money losses. The third camp that followed the idea was the state authority of the lake, as this allowed the Commander of the Port to reinforce national regulations on navigation. Thus, upgrading courses for all categories of navigation (four grades) was organized in collaboration with a technical training institute, members of the navigators' association and the office of the commander of the port, as representative of the Government.

Effects became visible shortly after the first batch of navigators was tested. The graduation ceremony was a success, as it brought publicity and recognition to the navigation personnel who graduated. Knowledge on safety matters improved substantially, reportedly accidents which can be traced to lacking professional knowledge have been declining. The navigators as well as the state authority have plans to make the assessment compulsory, but the motivation being in each case different. The navigators understood that being trained/upgraded and possessing a certificate protects them against non-qualified competing workers and allows them to claim better wages and better working conditions from the ship owners. The commander of the port, on the other hand, is highly interested in making the assessment compulsory so as to assure safety of the population. The ship-owners as employers (having their own association called ASSALAK) have been welcoming the skills assessment in the first case but they increasingly become cautious about the growing influence of the Government on their sector (as a side effect of the skills assessment) which means more control over their business practices. They appreciate better qualified navigation personnel, but now they are confronted with demands for higher wages...

## CONSIDER THIS

In skills assessment, master craftsmen should be the key persons to be considered and respected in terms of their competencies in order to safeguard ownership of the crafts sector.



# PART C LESSONS LEARNT



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# C



## 7. Conclusions on the positive changes made

Throughout this guide, numerous positive effects of skills assessment have been portrayed. This section provides a summary of these effects and the wider impacts of skills assessment on the crafts sector.

Please note: all statements made in this section have been provided by interviewees contacted during the pre-study. The authors have no means to independently verify these statements through cross checking and other methods of impact assessment.

Figure 6.



## Impacts on the “crafts sector”

A major impact of well-functioning skills assessment by SICOs, as identified in the majority of cases documented in this guide, is that it enhances the visibility and reputation of the crafts sector as a whole. Certification of skills leads to better quality of products and services and thus improves the image of small and medium enterprises working in the informal economy. The sections below discuss these positive changes in detail:

- **Enhancing publicity and visibility for the crafts sector**

Collaboration with other stakeholders, particularly authorities, gives visibility to the sector. As a direct effect, SICOs notice an increasing number of applications for membership, as it can be seen in the case of the multi trade associations GIPA in Cameroon and the SICO in Bohicon (Benin).

- **Improving the image of the sector through improved quality of production and service**

In Benin, SICOs say that since skills assessment of apprentices have been introduced, customers complain less about quality of products and services. The same was true for the quality of hairdressing services in Ghana. Since three SICOs have become engaged in skills assessment (and skills upgrading), there are visible effects on improved service quality of SICO members such as: enhanced hygienic standards, improved utilization of chemical products and better service quality (evidence provided by customer surveys).

The fact that master craftspersons have to assure good results of their apprentices leads to more engagement on the side of the master craftspersons: they try to upgrade themselves in order to better prepare their apprentices for assessment.

## Direct effects on improvement of skills, employability and access to market

- **Improved informal apprenticeship training**

Master craftspersons who have been upgraded and tested start to improve their own traditional ways of training and assessment of their apprentices, as it can be noticed in several cases. This leads to better skills of apprentices and enhances their employability.

- **Improved access to market for tested and certified master craftspersons**

In the context of trades/crafts which operate in both the informal and formal economy (e.g. construction related trades like plumbing and electrical installation), master craftspersons being tested and certified may gain better access to contracts awarded through competitive bidding. Certified products and services can attract new markets or help to sustain the market position of a business.

- **Improved employability and chances to start businesses for tested apprentices**

Certificates awarded by a reputable SICO gives a higher credibility to apprentices, which improves their employability and mobility in the labour market. It will also facilitate business start-ups (especially where a certificate is compulsory for obtaining a business license).

### *Effects on employment conditions*

Upgrading and skills assessment for workers or employees is a means to facilitate the claim for minimum wage or for wages according to a job profile or occupational category. This has been one of the main intentions of the Trade Union in Rwanda that intends to raise qualifications and to define professional profiles in order to advocate for better payment conditions for their members. In the DRC, the navigators hope for the same effect. These effects, however, depend not only on skills assessment but also on the labour market conditions as a whole.



### ***Effects on consumer protection and environment***

In many developing countries mechanisms for consumer protection are hardly developed. Skills assessment in trades which are sensitive for consumers (as they involve risks for life and health) like electricity, construction or public transport (including navigation) can be very useful and important.

- Skills assessment has reportedly improved the handling of cosmetic products by hairdressers and beauticians in Ghana, as the skills assessment pays attention to the proper handling of cosmetic products which can potentially harm a client if not applied properly.
- Accidents on roads, but also on lakes and river navigation, happen frequently in many countries. Upgrading and skills assessment in transport businesses can save lives and goods. The positive effects of skills assessment according to interviews are: shipping activities are managed and carried out in a more responsible way after qualification and assessment. Public authorities take the issue more seriously and have started to oblige ship-owners to have their personnel trained and certified.
- The mining association in Colombia applies environment-friendly mining practices which has led to a substantial reduction in pollution of rivers and soils, with long term positive effects on community health and protection of the environment as a whole.

### ***Advantages for customers***

Skills assessment directly results in improvements of services or production quality, as clearly stated in several cases covered by this guide.

### ***Social effects***

As stated above, skills assessment and certification can positively impact the status of the main addressees: the master craftpersons and apprentices.

- Taking part in assessment and certification mechanisms enhances the status of a master craftperson, either when they participate in assessment committees, sign the certificate of their apprentices or when their own certificate is signed by an authority.
- Raising the status of apprentices from poor social backgrounds:  
Apprenticeship is often linked to poverty as there are more people living below the poverty

line who opt for an apprenticeship for their children than other social groups. The certificate raises the status of their children, and, if they perform well in the assessment, it adds to their reputation.

- Better relation between masters and apprentices:  
Assessment also has an influence on the relationship between master craftsperson and apprentice: there is more respect for the master craftsperson and apprentices are keen on learning.
- Self-confidence of apprentices:  
Having been tested by objective assessors gives credibility in a social context where too much can be “bought”. Highlighted by GIPA, this effect means increased self-confidence for apprentices.
- Young people attracted by crafts:  
Certification gives some official character to apprenticeship. This attracts more young people. In the DRC it was noticed that young people, who in the beginning considered plumbing “dirty and for old people”, started to gain interest in this trade.

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## List of interview partners

### Case 1: Benin (Local Federations of craftspeople - Kandi, Djougou, Bohicon)

*(Phone/e-mail) interviews with:*

- Président de la Confédération Nationale des Artisans du Bénin
- Président du collectif d'artisans de Kandi
- Secrétaire Général du Collectif des Artisans de Djougou
- Président du collectif des associations de Bohicon
- Directeur du centre de formation professionnel de Djougou
- International experts

### Case 2: Rwanda (Trade Union COTRAF)

*(Face to face) interview with:*

- President of COTRAF
- General Secretary COTRAF Industries & Buildings
- Skills Development Expert, GIZ
- Private Sector Skills Development, GIZ
- ILO Programme Officer

### Case 3: Democratic Republic of Congo (Plumbers' Association)

*(Face to face) interview with:*

- President of the Committee
- Treasurer
- Committee members
- Vice president

## Case 4: Ghana (Hairdressing SBOs)

*Interview with:*

- National expert
- President of GHABA
- President of NABH
- National president of P-CABAG; Managing Director of FC Beauty College

## Case 5: Cameroon (The Intersectoral Craftworkers Association in Cameroon (GIPA))

*(Phone) interview with:*

- General Secretary of GIPA

## Case 6: Democratic Republic of Congo (Navigators' Association)

*Interviews with:*

- Commissaire lacustre de la Province du SUD KIVU, Commissioner for Navigation
- Chef de poste lacustre
- Enquêteur marin
- Capitaine des bateaux et formateur au CAPA

## ANNEX: Practice performance assessment items

All assessment items below relate to the occupational profile of “Up-country restaurant keeper” as developed in Uganda (not covered through case studies).

Good assessment criteria are highlighted in bold. Product-related assessment criteria are *in italics*, while process-related criteria are in normal font.

### MAINTAINING A SHELTER

NO	STEPS	ASSESSMENT CRITERIA
1	<b>Preserve shelter materials</b>	Dusted roof clean <b><i>No visible cobwebs and dust</i></b> Sand papered poles and reeds until smooth <b>Applied varnish and other preservatives in courses</b> <b><i>Appearance of varnish uniform, no slicks</i></b> No sand or dust particles visible from distance of half a meter
2	<b>Dry and damp dusting walls</b>	Dusted interior walls from above until no dust remains Dump dust walls clean with wet rug <b><i>No soot visible</i></b> Dried surface with a clean dry cloth
3	<b>Sweep floor</b>	<b><i>Opened the windows and doors wide while sweeping</i></b> <b>Sprinkled water on the floor, cleaned beginning with inner corners</b> <b><i>Corners as clean as central floor</i></b> Gathered rubbish and threw in the rubbish pit Burnt all the rubbish to ash completely
4	<b>Repaint and decorate</b>	Sand papered the surface until smooth Selected the specified paint and varnish according to the use earmarked by manufacturer <b><i>Painted the wall in and out until uniform colour is attained</i></b> Decorated as desired

## DISINFECTING EQUIPMENT

NO	STEPS	ASSESSMENT CRITERIA
1	Disinfect equipment	<p><b>Wipe equipment</b></p> <p>Used cleaning rags</p> <p><b>No particles left on equipment</b></p> <p>Cleaned equipment and place on a clean surface</p> <p><b>Use clean water</b></p> <p>Used detergent</p> <p>Used warm water for oil equipment like frying pans</p> <p>Used washer</p> <p>Equipment rinsed until no lather left</p> <p><b>Sterilize equipment</b></p> <p>Dipped equipment into boiling water for 10 minutes</p> <p>Used tongs to remove sterilized equipment</p> <p>Sterilized equipment and kept on sterilized screened tray</p> <p>Placed equipment upside down</p> <p><b>Dry equipment</b></p> <p>Used dry and sterilized rags</p> <p>Left to dry in air for 15 minutes</p> <p><b>Store equipment</b></p> <p>Sorted equipment and arranged</p> <p>Carried equipment to store without using bare hands</p>

## PREPARING MATOOKE

NO	STEP	ASSESSMENT CRITERIA
1	Prepare banana leaves	<p>Stalks and mid – ribs are removed full length</p> <p>If sunny: Set the leaves in sun for 20 minutes</p> <p>If cloudy: Smoked the leaves on fire for 1-2 minutes</p>
2	De-bunch the bananas	<p>Removed clusters from the bunch following an up and downward movement</p> <p>All the fingers separated from the clusters by pulling fingers apart</p>
3	Peel the fingers	<p>Removed peels whole length until inner banana is clean.</p> <p><b>No traces of finger cover seen</b></p>
4	Wash the bananas	<p>The fingers fully immersed in water</p> <p><b>The fingers washed until clean and stainless (no black marks are evident)</b></p>

5	<b>Prepare saucepan for steaming</b>	2" thick layer of mid-ribs placed at the bottom of the saucepan Three to four leaves laid in the saucepan to fully cover the saucepan ends and ribs at the base
6	<b>Matooke put in steaming saucepan</b>	Fingers placed horizontally and evenly on top of the other (leaving no space) Added proportional quantity of water (1 to 3 litre volume saucepan)
7	<b>Steam bananas</b>	Bananas heated at high temperature approx. 100°C for 1 hr.
8	<b>Mash the bananas</b>	Excess water drained <b>Firm pressure applied while pressing bananas until uniform texture attained.</b> Cutting (used approx. 6" pieces of banana leaves to protect the palms) Water of proportional quality (1 litre saucepan) is added by the side of the saucepan little by little The mashed bananas are set to simmer

## PREPARING CHICKEN FOR COOKING

NO	STEPS	ASSESSMENT CRITERIA
1	<b>Boil water</b>	Placed approx 3 litres of water on fire until it boils
2	<b>Cut off head</b>	<b>Tied the legs and fixed the wings</b> <b>Used a sharp knife</b> Cut approx 2 inches of the neck from the eye level Cut from the front half way the neck Cut off head completely Tied the skin of the neck at cut point <b>Skin did not shift when pulled</b>
3	<b>Place chicken in boiled water</b>	Held the legs while dipping in hot water Placed back the chicken in boiled water and dipped for approx. 5 – 8 minutes <b>Turned and dipped front until the whole chicken is soaked</b>
4	<b>Remove feathers</b>	<b>Pulled feathers in the opposite direction of growth; not tearing the skin.</b> <b>Placed chicken on fire, raised up approx 3 inches above the fire</b> <b>Residual feather burnt off completely</b>
5	<b>Remove intestines</b>	Split chicken horizontally between the thighs from the back to the chest bone Pulled out the intestines with the oesophagus. Not damaging the bile <b>Removed gizzard, liver, heart and lungs completely</b>
6	<b>Cut into pieces</b>	Used a sharp knife Cut through leg, wings, chest joints

## BAKING BREAD

NO	STEP	ASSESSMENT CRITERIA
1	<b>Set oven</b>	Temperature set to 200-250° Stop clock set to 45 min – 1 hour
2	<b>Enter moulds</b>	Moulds placed; <b><i>did not touch walls</i></b>
3	<b>Bake bread</b>	Gaps in between minimum 1” If oven with steam mechanic: steam valve opened at least 3 minutes. If steam mechanism defect: water splashed against wall after at least 3 minutes. After steaming, bottom heater turned down to low level (5-3) Top heater switched off Temperature reduced to 200°C, gradually falling Door opened after at least 30 minutes <b><i>Uniform golden crust achieved</i></b>
4	<b>Check bread</b>	<b><i>Bread fallen off freely out of mould</i></b> <b><i>No black crust on top and spotless all over</i></b> Overall shape symmetrical After cooling: <b><i>No holes inside</i></b> <b><i>Felt moist inside</i></b> <b><i>Crust not cracking under squeeze</i></b>

## WASHING WHOLE FISH

NO	STEPS	ASSESSMENT CRITERIA
1	Wash fish from the outside	Used sharp knife to remove scales Held knife in rectangular position for scaling Followed tail to head direction No scales left on fish No scratches on skin, no cuts into skin Placed whole fish in cold water completely and washed Washed second time with clean water or under running water
2	Washed fish from inside	Removed intestines and bloody contents completely from the inside of the fish by pulling with the hand <b><i>Washed away the dark substances inside of the fish</i></b> <b><i>Washed the head by opening gills and pressing produced no more bloody and sticky substances</i></b> <b><i>Separated the hair of gills and cleaned until colour changes from red to pink.</i></b> Washed mouth of fish to remove the sticky substance until clean Washed outside of fish using clean water until the <b><i>top skin colour changed to silver</i></b>

## PREPARING BEANS (1/2 Kg) WITH MILLET BREAD (1 Kg)

NO	STEPS	CRITERIA
1	<b>Clean Utensils (sauce pans, plates, mingling stick, ladle)</b>	Scrubbed utensils with steel wire or grass or sisal and rinsed until no stain and dirt are left
2	<b>Sort beans (1/2 kg)</b>	<b>Removed all stones, grass, leaves, spoilt seeds, weevils</b>
3	<b>Wash beans</b>	2 litres of water poured in saucepan ½ kg beans washed twice until water is clear
4	<b>Heat water to boil</b>	Used saucepan or pot <b>Heated water until boiled</b>
5	<b>Monitor the cooking</b>	<b>Scooped beans with hands and poured in boiling water</b> <b>Added charcoal when fire is still on</b> <b>Added more water at a time when the beans are seen above boiling soup</b>
6	<b>Season beans</b>	<b><i>Beans are cooked until they can be smashed with fingers</i></b> Seasoned beans i.e fried with onions, tomatoes, cooking oil, beans added with groundnut paste, simsim paste Reboiled seasoned beans for about 15 minutes
7	<b>Prepare millet bread</b>	a) Boil water Measured 2 litres of water in a saucepan and boiled b) Mingling Added 1 kg flour ±100gms to 2 litres ±¼ lts of water (or used ½ litre plastic mug to add 2 cups of flour to 4 cups of boiled water) <b>Mingled flour with boiled water using a mingling stick until the powder flour (lumps) no longer seen</b> <b>Maintained steady fire during mingling</b> Used a flat plate to remove the millet bread from the sauce pan to plate(s)



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