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Vocational teachers and trainers in a changing world: the imperative of high-quality teacher training systems

Michael Axmann, Amy Rhoades and Lee Nordstrum
with contributions from Josée-Anne La Rue and Michelle Byusa

Skills and
Employability
Branch

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Preface

The primary goal of the International Labour Organization (ILO) is to work with member States towards achieving full and productive employment and decent work for all. This goal is elaborated in the ILO Declaration 2008 on *Social Justice for a Fair Globalization*,[1] which has been widely adopted by the international community. Comprehensive and integrated perspectives to achieve this goal are embedded in the Employment Policy Convention of 1964 (No. 122), the *Global Employment Agenda* (2003) and – in response to the 2008 global economic crisis – the *Global Jobs Pact* (2009) and the conclusions of the *Recurrent Discussion Reports on Employment* (2010 and 2014).

The Employment Policy Department (EMPLOYMENT) is engaged in global advocacy and in supporting member States in placing more and better jobs at the center of economic and social policies and growth and development strategies. Policy research and knowledge generation and dissemination are essential components of the Employment Policy Department's activities. The resulting publications include books, country policy reviews, policy and research briefs, and working papers.[2]

The *Employment Policy Working Paper* series is designed to disseminate the main findings of research on a broad range of topics undertaken by the branches of the Department. The working papers are intended to encourage the exchange of ideas and to stimulate debate. The views expressed within them are the responsibility of the authors and do not necessarily represent those of the ILO.

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[1] See http://www.ilo.org/global/about-the-ilo/mission-and-objectives/WCMS_099766/lang--en/index.htm

[2] See http://www.ilo.org/employment

Foreword

The youth employment crisis and evident skills mismatch between labour market needs and general and vocational education has raised recognition of the importance of technical and vocational education and training (TVET). The capacity of TVET systems to provide high quality and relevant training depends largely on the quality of its teachers and trainers, and, by extension, on the quality of their teacher training systems.

This paper presents an analytical framework for assessing TVET teacher training systems. It takes a holistic approach, providing a conceptual framework that government agencies and TVET institutions can use to examine the internal efficiency and coherence of their teacher preparation programmes, as well as assess the dynamic capability of the system to anticipate and respond to the needs of both employers and students.

This framework responds to the contemporary imperative for high-quality TVET teacher training systems that are effective, efficient, equitable and innovative, and furthermore, that are aligned to national and local objectives to improve productivity, employment and social inclusion. It is provided to help governments and institutions deal with the challenge of preparing teachers and trainers in a changing world so that they in turn can equip the next generation with the skills and ability to continue learning that they will need throughout their working lives.

Michael Axmann, Skills Specialist in the ILO's Skills and Employability Department, led the ILO research on teacher training and oversaw the preparation of this paper. It is a follow-up to joint work in 2010 with the ILO's Sectoral Activities Department, in the preparation for the Global Dialogue Forum on "Teachers and trainers for the future – Technical and vocational education and training in a changing world" (September 2010) which brought together representatives of Governments, teachers' trade unions and employers' associations to discuss current challenges in TVET teacher training, working conditions, and professional development and to share experiences in responding to those challenges effectively. This work was led by Bill Ratteree, then Senior Education Specialist in the ILO's Sectoral Activities Department.

This working paper reflects the background research and conclusions of the Global Dialogue Forum, supplemented by reviews of current practice in teacher training and consultations with colleagues from many other organizations, including the World Bank, the European Training Foundation, the German International Cooperation, Luxembourg Agency for Development Cooperation, and the Swiss Development Cooperation.

I would also like to thank the co-authors Amy Rhoades and Lee Nordstrum for their research and drafting, and Josée-Anne La Rue and Michelle Byusa, for their research assistance while interns in the Skills and Employability Branch of the ILO. Jane Auvre prepared the manuscript. Along with the authors, I am grateful to many ILO colleagues for their comments and observations on this paper: Paul Comyn, Patrick Daru, Christine Hofmann, Marion Jansen, Oliver Liang, Barbara Murray, Hassan Ndahi, Naoko Otobe, Debra Perry, Akiko Sakamoto and Fernando Vargas.

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Abbreviations and acronyms

AMU	Adult Vocational Training (Denmark)
CBT	Competency-based Training
CEART	Committee of Experts on teachers
CEDEFOP	European Centre for the Development of Vocational Education and Training
CPD	Continuing Professional Development
DACUM	Developing a Curriculum
EI	Education International
ELRC	Education and Labour Relations Council
ERP	Education for Rural People
ETF	European Training Foundation
EU	European Union
GTZ	German Technical Cooperation
ICT	Information and communication technology
IDP	Internally Displaced People
IIEP	International Institute for Educational Planning (UNESCO)
ILO	International Labour Organization
IT	Information technology
KAB	Know about business
NGO	Non-governmental organizations
NSDC	National Skills Development Cooperation
OECD	Organization for Economic Co-operation and Development
RCP	Regional Cooperation Platform
ROC	Regional Training Centre
SMEs	Small- and medium-sized enterprises
TREE	Training for Rural Economic Empowerment
TVET	Technical and vocational education and training
UNESCO	United Nations Educational, Scientific and Cultural Organization
YEP	Youth Education Pack

Executive summary

Contemporary challenges in TVET teacher training systems

In light of the job crisis and skills mismatch between labour market needs and training provided by general and vocational education systems in many countries, it has become widely recognized that TVET provision is an important, even growing, part of national education systems and any skills development agenda. At the same time, the capacity of the TVET sector to adequately prepare skilled workers through the provision of relevant skills development programmes of high-quality depends largely on the quality of its teachers and trainers, and, by extension, the quality of its teacher training programmes. Given existing teacher shortages within the field of TVET, it is imperative to take a critical view of current TVET teacher training programmes and identify the challenges therein, including:

- Lack of structure and relevance to ensure that TVET is recognized as a potential career path and that teachers and trainers are adequately prepared to share these skills with young people;

- Lack of responsiveness and inclusion to ensure that TVET teacher training programmes are not limiting the specific fields and opportunities available to instructors and the students they teach;

- Lack of innovation and progress to ensure that TVET teacher training programmes are constantly evolving and adapting to the latest advances in pedagogy and technology; and

- Lack of representation and communication to ensure that TVET teachers and trainers have an active voice and collegial support system to encourage them and enhance job satisfaction.

Teacher training, curricula and pedagogical challenges

Conceptually, TVET teacher and instructor training is still seen in many countries as something that ‘people will do on the job’. Very often there are no career paths for becoming a teacher or trainer in TVET and there are no clear stages of teacher training either. Pre- and in-service programmes for teachers and instructors are often not in place, creating difficulties for personnel to function effectively without a training support framework in a sector that is highly dependent on innovations and is technology-driven. Vocational curricula, which are still frequently prepared and set by government officials with little or no exposure to the world of work, represent another weak point in the learning chain. Even worse, previously adopted curricula are extended by incorporating new content without scrapping outdated, irrelevant material (Axmann, 2004). Teaching and training materials are often outdated and not relevant to what is needed for specific skills development (Johanson and van Adams, 2004).

There is still a strong tendency to equate teaching and training in TVET with pure lecturing. This is often the least suitable preparation for lifelong learning. The opening up of the pedagogical ‘method box’ in TVET and the effective application of new teaching and learning approaches could be a means of liberalizing learning for teachers and trainers. It also offers a much more relevant and effective way of acquiring competencies that is appreciated by enterprises, students, teachers and trainers and trade unions, precisely because of its relevance and validity for the transition from TVET institutions to work.

Technical and vocational teacher training in TVET reform processes

In the last ten years the roles and responsibilities of teachers and trainers in TVET have changed considerably in a wide range of countries, becoming multi-functional and combining many professional elements with those of active stakeholders in TVET design and reform (CEDEFOP, 2009; ETF, 2006; Grootings and Nielsen, 2005; OECD-CERI, 2009a). The changes have challenged teacher training programmes to adapt to change via new policies and structures so as to prepare trainers for their new and constantly evolving roles.

Teachers and trainers in TVET who are trained to meet these new challenges and who are used as key agents of change in reform processes contribute to designing new classroom and workshop learning in TVET schools. They also give feedback about training in enterprises and other workplaces. For these reasons, one of the fundamental discussion threads in debates around evolving TVET roles and responsibilities centres on involving teachers and trainers in designing appropriate learning environments to contribute to improved TVET systems, and recognizing them as full stakeholders in TVET reform along with acceptance of their own changing professional roles (Grootings and Nielsen, 2005: 14; Nielsen and Nikolovska, 2007).

Four pillars and twelve key elements of teacher training systems

The aforementioned challenges, trends and evolutions of both policy and practice place considerable demands on teacher training systems in TVET. It is unrealistic, however, that any national training system addresses all of these challenges, and does so in complete alignment with other social sectors. Moreover, there are few concrete conceptualizations of what qualifies as a 'high-quality' teacher training system and paltry analytical tools that might aid this process. Thus there is room for improvement in all TVET teacher training systems.

In response to this, contemporary TVET systems require teacher training programmes that are effective, efficient, equitable and innovative, and that are furthermore coherent with national and local objectives and the overall policy context. To this end, this paper attempts to fill this gap by presenting a conceptualization and definition of a comprehensive teacher training system in TVET and by offering an analytical tool that may be employed by countries to assess their own training systems. Analysis of good practices reveal that effective TVET systems include four essential pillars that comprise successful teacher training systems: 1) structure and relevance; 2) responsiveness and inclusion; 3) innovation and progress; and 4) representation and communication. The pillar titles and their significance are explained in greater detail below. These pillars are in turn composed of 12 key elements of teacher training, which, if appropriately addressed, can provide the framework for a high-quality TVET system that is effective, relevant, innovative, responsive to the differentiated needs of students, and that represents a true partnership between multiple stakeholders. Such a system would supply teachers and trainers with the skills necessary to be classroom leaders, innovative pedagogues, partners in policy reform and adaptive curricula designers and implementers.

Pillar one: Structure and relevance

Effective teacher training systems are those that have a meaningful structure which includes different distinct stages of teacher preparation, those that train recruits according to good practice and in ways coherent with local contexts. This paper advocates for a system approach that incorporates both pedagogical and technical components throughout a four-phase training system that includes both initial and continued training components for teachers and trainers. In addition, both high quality and relevance are indispensable characteristics of contemporary teacher training systems.

Key element one: Providing a four-phase training system for teachers and trainers

Key element two: Setting up close linkages between training and industry

Key element three: Ensuring meaningful participation of teachers and trainers at the policy level in TVET system design and reform

Pillar two: Responsiveness and inclusion

Teacher training systems need to build the entrepreneurial capacities of teachers and guarantee inclusive teacher training systems. Students in TVET systems are not identical or replaceable widgets on a linear production line of learning; they are, rather, dynamic individuals with diverse needs and backgrounds. As such, teachers and trainers need to adopt differentiated teaching strategies and inclusive programmes that respond to unique student needs and a variety of employment tracks, including the option of entrepreneurship. Moreover, these actions are necessary to extend educational and social rights to all persons, including those with disabilities.

Key element four: Integrating entrepreneurship education into training

Key element five: Designing gender-balanced and inclusive programmes

Key element six: Employing flexible, student-centred training methods to address learning needs of diverse individuals

Pillar three: Innovation and progress

In order to remain relevant to market demand and technological changes, teacher-training systems should incorporate innovative practices, both in course content and instructional pedagogy, into existing programmes. Teachers must be exposed to and trained to utilize emerging technologies in the classroom through systematic and continuing professional development (CPD). In addition, the concept of innovation should extend to pedagogical practices in the classroom; teachers and trainers should be encouraged and supported as they incorporate innovative instructional methods to meet the needs of trainees and integrate emerging technologies into curricula in new ways. Innovative partnerships between training institutions and industry are also key mechanisms for acquiring practical knowledge and experience.

Key element seven: Adapting to emerging technologies and innovations in the workplace

Key element eight: Integrating pedagogical innovations in skills development

Key element nine: Focusing on core skills of teachers and trainers

Pillar four: Representation and communication

Social dialogue is a central tenet of the ILO and is essential for establishing educational policies and practices that meet the needs and concerns of all stakeholders. It is a positive means by which to develop collaborative solutions to common problems and issues relevant to conditions of work and, by definition, engenders cooperative working relationships between diverse groups of actors. Social dialogue, as conceptualized by the ILO, is understood to mean all forms of information sharing, consultation and negotiation between educational authorities, public and private, and teachers and their democratically elected representatives in teachers' organizations (ILO, 2003a).

Key element ten: Establishing venues for dialogue among social partners 'on' and 'in' teacher training

Key element eleven: Raising awareness among teachers and trainers about labour market inequalities and their own labour rights

Key element twelve: Developing networks for knowledge-sharing among teachers and trainers

The way forward

Using the four pillars and 12 key elements as a self-diagnostic tool for teacher training systems

Beyond a theoretical conceptualization of critical components of effective teacher training systems of high quality, the four pillars and 12 key elements identified and discussed in this paper are designed to serve as a self-assessment rubric against which countries can evaluate their teacher training systems and thereby identify areas for interventions. The spider web chart presented in Chapter Seven is recommended as a self-diagnostic tool available for policymakers, researchers, practitioners and others to evaluate the strengths and weaknesses of TVET teacher training. It can be used in a national context, institutional context, or a variety of other settings.

Prologue

Teachers and trainers in technical and vocational education and training: who and what are we talking about?

What is meant by 'technical and vocational education and training'?

The term 'technical and vocational education and training' (TVET) used in this working paper corresponds to the comprehensive definition adopted in the UNESCO and ILO Recommendations on TVET for the Twenty-first Century as 'referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life' (ILO/UNESCO, 2001: 7).[3] This term includes the development of skills and competencies relevant to the world of work in a range of learning contexts including private and public training institutions, work places and informal learning places.

Similarly, the term TVET encompasses the broader notion of skills development as espoused by King and Palmer as "the productive capacities acquired through all levels of education and training occurring in formal, non-formal, and on-the-job settings, which enable individuals in all areas of the economy to become fully and productively engaged in livelihoods and to have the opportunity to adapt these capacities to meet the changing demands and opportunities of the economy and labour market" (King and Palmer, 2006: 16). Where a distinction is needed in the literature, the provision of TVET by the public sector is referred to as 'formal TVET'. When referring to quality/formal apprenticeship systems, formal TVET can be carried out in a joint way between the public and the private sector. Furthermore, workplace-learning is usually done by the private sector alone. The provision of TVET outside of these channels is referred to as 'informal TVET' which encompasses training through a variety of non-state providers including community-based organizations, donor agencies, informal economy associations, and master craftspersons, among others.

What is meant by TVET 'teachers' and 'trainers'?

In terms of this working paper, a sharp line differentiating 'teachers' and 'trainers' and the various terms employed in many different country contexts is not practical given the diversity of orientation among TVET systems. A recent OECD report (OECD-CERI, 2009a) refers to vocational trainers as those who are primarily responsible for imparting practical vocational skills, whereas vocational teachers are those primarily responsible for theoretical skill instruction. Other distinctions between 'trainers' and 'teachers' draw the line between the former doing their work in workplace-based training in enterprises governed by economic, largely profit-making considerations and the latter serving in largely non-profit, public schools (CEDEFOP, 2009). Another typology refers to four broad categories, consisting of:

- Teachers of basic or general education subjects within vocational institutions;

[3] Though jointly published, the cited document includes the individual recommendations of each organization, UNESCO and the ILO.

- Teachers of theoretical or knowledge-based components of vocational programmes, the kinds of practitioners that might be the closest to those considered as 'professional' TVET teachers;
- Teachers, trainers and instructors of practical exercises/programmes ("practicums" in some contexts), apprenticeships or internships in others) in vocational or work preparation and awareness programmes, or in some dual systems as apprenticeship and internship instructors or supervisors;
- Trainers, training coordinators or training advisers working to integrate skills training and knowledge-based learning for work-based learners, typically working for employers (Parsons et al., 2009: 79).

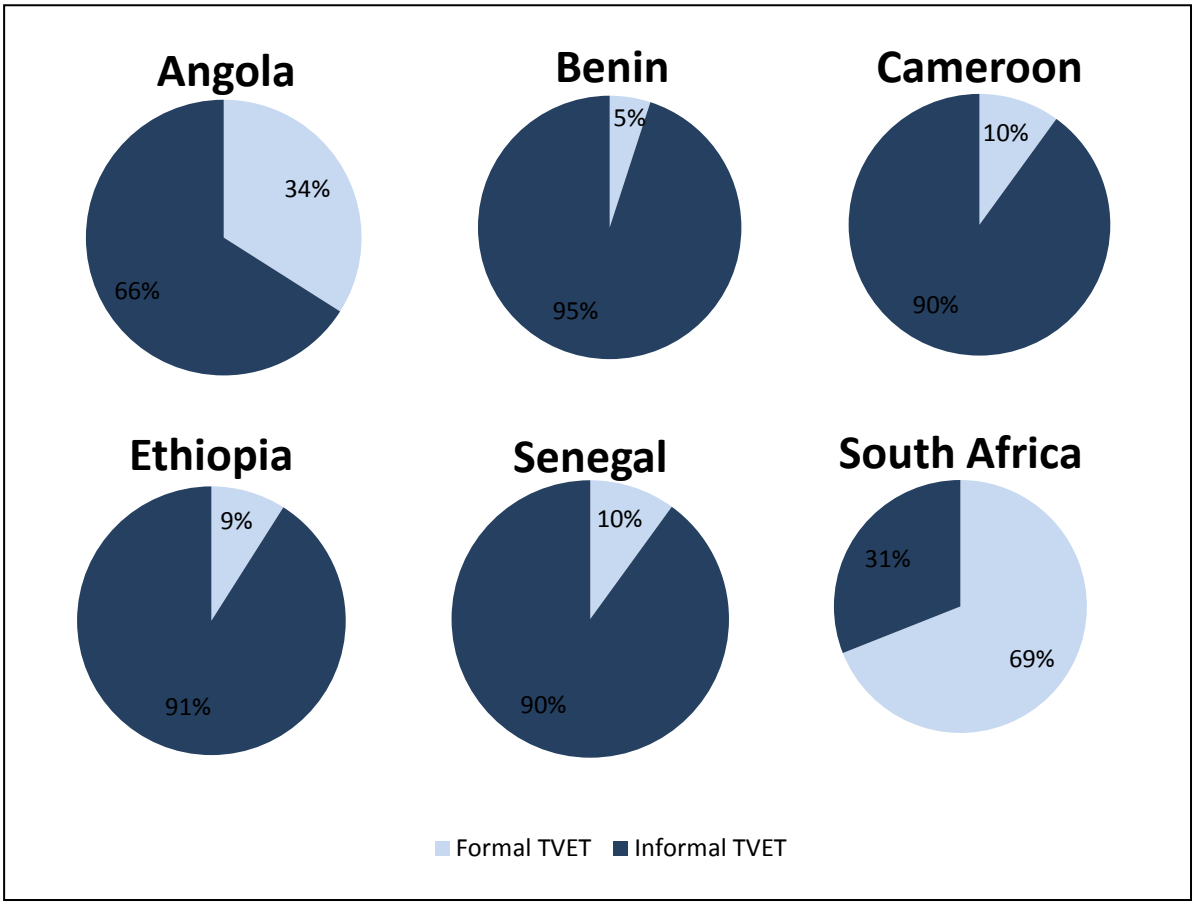
Given that different country systems and institutions have one or more of the above, even require or encourage a combination of the theoretical and practical, or the general (languages, maths, sciences, etc.) and technical/vocational subjects to be taught by the same individual, for the purpose of this report teachers and trainers are understood to apply equally to staff in a TVET system or institution who are responsible for instruction of learners, whatever the subject or instructional orientation. The term 'teacher and trainer' encompasses terms such as 'tutor', 'lecturer' or 'instructor' used in various national contexts.

Why include the informal economy?

The informal economy is growing. Contrary to earlier predictions, the informal economy is not a passing phenomenon, nor is it marginal and destined to disappear in the medium term. Its prevalence and growing complexity within the economic, social, and political landscape of developing countries are increasingly acknowledged. The ILO estimates that non-agricultural employment in the informal economy comprises between one half and three quarters of employment in developing countries (ILO, 2012a). The recent economic crisis has also contributed to growth of the informal economy in many developed countries.

While training in the informal economy constitutes a small percentage of the overall training system in most developed countries, it is significantly important to skills development in many developing countries. Figure 1 gives an indication of the prominence of the informal TVET across various countries in Africa, even in years preceding the crisis. The informal economy is largely its own training provider and often the most accessible avenue for skills development among those at the base of the economic pyramid (Walther and Filipiak, 2007). Additionally a survey conducted by the French Development Agency found that among young people in Africa who had already completed tertiary education, many were entering the labour market through completing apprenticeships or other forms of training within the informal economy (Walther, 2011). This phenomenon reiterates the importance of skills development in the informal economy. Currently numerous developing countries are spending their entire national training budget on a formal training system that is, in reality, training less than 10 per cent of the population. Given the on-going skills deficits and skills mismatch that many of these countries face, this disproportionate allocation of resources is an important issue to address.

Figure 1: Estimated shares of formal and informal TVET in selected African countries



Source: Walther and Filipiak, 2007.

Because of the significant role that the informal economy currently plays in skills acquisition, it is vital to include instructors from this arena within the frame of analysis of skills deficiencies among trainers. It is imperative that training in the informal economy benefits from teacher training upgrades to improve skills and learning outcomes. This form of training is the most heavily accessed by educationally marginalized groups. If it yields poor skills development and does not adequately prepare learners for the world of work, this perpetuates economic marginalization. Only by ensuring that trainers and master craftspersons in the informal economy have themselves acquired adequate training, and have the ability to transfer skills to the next generation, can the cycle of incomplete skills transfer be broken. This is of particularly importance if a student is going to spend several years under the tutelage of a master craftsperson. This working paper argues that adequate training and certification of skills of informal trainers needs to be an integral component as TVET in the informal economy progresses towards more structured and formalized systems.

The current ILO response and relevant international frameworks

Promotion of skills and employability is integral to the work of the ILO. The Global Employment Agenda (ILO, 2003b) and the ILO Declaration on Social Justice for a Fair Globalization (ILO, 2008e) highlight skills development as central to improving productivity, job creation and standards of living. The Human Resources Development Recommendation, 2004 (No. 195) provides guidance on the content and reform of skills policy, noting that "qualified teachers and trainers working under decent conditions are of

fundamental importance" (ILO, 2004: 5). The ILC Conclusions on skills for improved productivity, employment growth and development adopted by the International Labour Conference at its 97th Session in 2008 establish a strategy for skills development (ILO, 2008a).

In 2009, the G20 leaders at their Pittsburgh Summit asked the ILO to prepare a training strategy to prepare the workforce for the economic recovery. The resulting G20 Training Strategy, A Skilled Workforce for Strong, Sustainable, and Balanced Growth, which also benefitted from discussions at an ILO Global Dialogue Forum on Strategies for Sectoral Training and Employment Security (ILO, 2010c), notes the critical importance of teachers and trainers in the provision of quality training, stating that "a great deal of effort is required to make sure that skills development systems deliver both the quantity and the quality of training needed. This entails in the first instance an adequate supply of qualified teachers, trainers, directors of training institutions, and master craftspersons to take on apprentices; the provision of opportunities for them to periodically upgrade their own skills; and conditions of work comparable with those in industry so as to attract the most talented staff" (ILO, 2010e: 27).

ILO research and publications

Research and dissemination of good practices provide support for informing policy decisions and improving teacher training. The publications of the ILO offer insight into skills development and training issues in both the formal and informal economy. Recent publications include:

- *Upgrading informal apprenticeships: A resource guide for Africa* (ILO, 2012d): This publication promotes a policy learning approach to build on the strengths of informal apprenticeship systems. It provides an overview of what is known about upgrading informal apprenticeship for decision makers. It also adds value by proposing a new conceptual approach: viewing informal apprenticeship not as a "primitive practice", or "exploitation of young people" – as it has often been stigmatized – but as the training system of the informal economy that has evolved out of the traditional family and kinship based apprenticeship, and that has potential to develop.
- *Policy Brief: Upgrading Informal Apprenticeship Systems* (ILO, 2011c): This policy brief focuses on the opportunities made available in informal apprenticeship systems for improving skill provision in the informal economy to offer young people, especially in developing countries, ways to more productive and decent jobs. The brief draws from ILO Skills and Employability Branch's work with constituents to upgrade and expand informal apprenticeship systems through technical cooperation projects operating in Africa and Asia.
- *Study on the reintegration of children formerly associated with armed forces and groups through informal apprenticeships* (ILO, 2010g): a study on informal apprenticeship as a means of reintegrating CAAFAG in two localities in Africa, Korhogo (Ivory Coast) and Bunia (Democratic Republic of Congo).
- *A study on informal apprenticeship in Malawi* (ILO, 2010h) and *Understanding informal apprenticeship – Findings from empirical research in Tanzania* (Nübler et al., 2009): country level findings which provide insight into the current operations of informal apprenticeships and offer proposals for upgrading the system while sustaining its traditional institutional framework.
- *Skills and productivity in the informal economy* (ILO, 2008b): a working paper which explores skills and productivity within the informal economy, present challenges, current responses, and lessons learned that can contribute to improving existing work in the informal economy and enabling the transition of informal activities to the formal economy.

Box 1: Strategies for sectoral training and employment security

A Global Dialogue Forum on sectoral training strategies in relation to economic recovery and employment security reached consensus in late March 2010 on the desirability of a strengthened sectoral approach to training based on close collaboration with social partners at national and local level. Among elements to be implemented in such a strategy would be:

- *Partnerships for training design:* Establishing bipartite or sectoral councils, including training providers, to ensure better matching between demand for skills in sectors and training provision, anticipate future labour market and skills needs, assess the quality and relevance of training programmes and improve delivery of training, including for small- and medium-sized enterprises (SMEs).
- *Skills, employment and growth linkages:* Linking sectoral (including cross-sectoral) approaches to skills development within long-term national growth strategies to build coherence between skills development and labour market policies, technological innovation, public services delivery, trade and investment.
- *Theoretical and practical training:* Combining classroom with work experience through apprenticeships and other traineeships to ease labour market transition.
- *Skills and labour markets:* Greater reliance on sound labour market information and analysis on both demand and supply through closer cooperation between governments, sectoral social partners and labour market stakeholders to identify skills gaps and matching, especially at the sectoral level; with career guidance and vocational counselling as an important element of such a strategy.
- *Targeted skills strategies:* More inclusive skills programmes targeting disadvantaged groups.

Source: ILO, 2010c.

- *Facilitating labour market entry for youth through enterprise-based schemes in vocational education and training and skills development* (Axmann, 2004): a working paper which addresses the role of skills training provided by enterprises to facilitate the first labour market entry for young school leavers.

Technical cooperation

The ILO's programme on skills and employability also engages in preparation of teachers and trainers through a variety of approaches. Technical cooperation applies research findings and lessons from evaluations to country-specific circumstances. Technical cooperation projects in teacher training focus on capacity building and sustainability. Currently the ILO is working to develop the skills of teachers and trainers in both the formal and informal economies, for example:

- In Zimbabwe, Benin and Burkina Faso, the ILO's Youth Skills and Rural Development Reinforcement Project takes a holistic approach to skills and employability by engaging both apprentices and master craftspersons through trainings and capacity reinforcement activities. By 2014, an estimated 3'045 master craftspersons (1'015 in each of the three countries) will participate in trainings, thereby allowing them to upgrade their pedagogical, technical, and business skills and enabling a more holistic skills transfer to their apprentices.
- In Indonesia, the ILO's Education and Skills Training for Youth Employment (EAST) Project until recently worked very closely with national ministries to increase the institutional capacity of teacher training centres and networks of trainers. The "4 in 1

Handbook for Training Providers" developed by the ILO was recently adopted by the Ministry of National Education and will be utilized in regional training centres across Indonesia. The handbook provides guidance on how to effectively implement competency-based, demand-driven trainings. A five-day training of trainers on how to use the handbook was held in Indonesia in December 2010 (ILO, 2011a).

- In Geneva, the importance of understanding evolutions in the field of TVET teaching in order to inform policy development and better prepare TVET teachers and trainers laid the foundation for further ILO research conducted jointly by the Sectoral Activities Department (SECTOR and EMP/SKILLS (ILO, 2010a) on the subject in 2010. The findings and the implications thereof were then presented to a tripartite representative forum (ILO, 2011b) as a catalyst for further dialogue as discussed below.

As highlighted in Section VII of ILO Recommendation 195 Human Resources Development, 2004, ILO member States are called on to "develop a framework for the certification of qualifications of training providers" as well as "develop quality standards for trainers and create the opportunities for trainers to meet such standards."

Similar to general education, CPD, constitutes a fundamental and increasingly important link in the TVET teacher/trainer learning chain. International standards on further and in-service education (ILO/UNESCO, 1966: 6-7; ILO, 2000: 35) stress the necessity, even professional obligation, of such lifelong learning opportunities for all teaching professionals in the interests of education and teaching quality, including the need to integrate the latest educational research into successful programmes, establishing incentives for teachers (financial but also timetabling and delivery modes) that will permit teachers to take advantage of opportunities or meet regulatory obligations and exchanges with enterprises and other non-school workplaces that will help teachers to stay abreast, for example through regular teacher internships.

Means by which teachers and trainers in TVET are remunerated and rewarded for their work affect a number of key human resource issues, ranging from recruitment and retention to the motivation for high-level professional performance. International standards on teachers (ILO/UNESCO, 1966: clause 114; UNESCO, 1997: clause 57) refer to the need to set remuneration at levels that reflect the importance of teaching (duties and responsibilities), its perceived status and comparison with other professions requiring similar qualifications, and that allow these professionals to carry out their teaching tasks, as well as engage in CPD and self-improvement to renew knowledge and skills essential to their mission. Levels of remuneration and benefits assume even more importance in TVET systems because of the strong competition for skilled professionals in private enterprise.

Workload of teachers and trainers is determined by a number of factors, beginning with hours of work fixed by statute, public service regulations, collective bargaining agreements or institutional requirements. The international Recommendations on teachers (ILO/UNESCO, 1966: clauses 89–91; UNESCO, 1997: clause 62) call for hours of work to be fair and equitable, permitting staff to effectively carry out their professional responsibilities, notably by taking account of the multiple components of teachers' work - classroom instructional time, numbers of lessons, course preparation, student evaluation, extra-curricular activities within institutions, consultations with students and parents, and community outreach at post-secondary level – and to be negotiated or at least the object of consultations with teachers' organizations. Given the expected duties of TVET staff as part of what might be termed broadly community outreach, there are also very high expectations of engagement with enterprises and the world of work.

1. Contemporary challenges in TVET teacher training systems: coherence, inclusivity and quality

In light of the job crisis and skills mismatch between labour market needs and those provided by general and vocational education systems in many countries, it has become widely recognized that TVET provision is an important, even growing, part of national education systems and any skills development agenda. At the same time, the capacity of the TVET sector to adequately respond to these challenges through the provision of high-quality and relevant skills development programmes depends largely on the quality of its teachers and trainers, and, by extension, the quality of its teacher training programmes. However, it is far from clear that national teacher training systems are uniformly and sufficiently high-quality, adequately coherent, suitably inclusive, pedagogically sound, commendably innovative or satisfactorily effective to meet these requirements. Contemporary teacher training systems in TVET face curricular and pedagogical challenges, shifts in the roles accorded to teachers and trainers, and ever-evolving conceptions of what constitutes 'good-quality' instruction.

1.1 Teacher training, curricula and pedagogical challenges

Conceptually, TVET teacher and instructor training is viewed in many countries as something that 'people will do on the job'; there seems to be a lack of a clear career pathway or clear stages of professional development. Pre- and in-service programmes for teachers and instructors are often not in place, creating difficulties for personnel working in a sector such as TVET, which is highly dependent on innovations and technology-driven, to function effectively without their own training support framework. Innovations also require very close contacts with enterprises and other stakeholders, including employment services, labour market institutions and other social partners, with other vocational teachers and of course with TVET students, for purposes of effective teaching/training, career guidance and more. Already in the 1960s, international standards on teachers called for programmes to include practical experience acquired in industry, commerce and agriculture (ILO/UNESCO, 1966: 21(2)). However, these aspects of training of teachers and trainers too often remain a missing link in designing innovative schemes in TVET (Grootings and Nielsen, 2005).

Vocational curricula represent another weak point in the learning chain. In some countries there is still a tendency that government officials with little or no exposure to the world of work establish and prepare curricula. Even worse, previously adopted curricula are extended by incorporating new content without scrapping outdated, irrelevant material. Thus the gap between the TVET training system and employment needs and opportunities keeps widening when the question of 'what to train?' is defined by closed-circuit training provider systems (Axmann, 2004).

Teaching and training materials are often outdated and not relevant to what is needed for specific skills development. Too often teaching and training materials are of little relevance for what the students have to face in the world of work after they leave their 'refuge' of (mostly) government-run technical vocational schools and institutions (Johanson and van Adams, 2004). More relevant labour market approaches would go beyond developing pure occupational standards (as for example in DACUM[4] exercises),

[4] DACUM stands for "Developing a Curriculum" and is a method first developed in Canada that is frequently used in carrying out occupational analysis and in developing curricula and occupational standards. This work is done in a one or two-day exercise that provides a picture of duties, tasks, knowledge, skills, traits and in some case work and business processes in specific occupational fields. These exercises can also be carried out on a tripartite basis. For more information see http://www.dacum.org.

and can be done in very close cooperation with teachers and trainers, but would rely on real work and business processes as the basis for TVET learning. In a modern labour market with permanent innovations and the requirement for life-long learning, the ability to self-learning in a team approach is equally or even more important than having a broad range of technical and vocational know-how learned from theoretical coursework and imitation of skills by learners.

Yet, in many countries, generally more so in transition and developing countries, there is still a strong tendency to equate teaching and training in TVET with pure lecturing. This is often the least suitable preparation for lifelong learning, where new problems and as yet unknown job and skill requirements will necessitate on-going problem solving without external coaching, underlying again the critical role played by teamwork and self-learning capacity for present and future workplace responses. The opening up of the pedagogical 'method box' in TVET and effective application of new teaching and learning approaches therefore could be a means of liberalizing learning for teachers and trainers. It also offers a much more relevant and effective way of acquiring competencies that is appreciated by enterprises, students, teachers and trainers and trade unions, precisely because of its relevance and validity for the transition from TVET institutions to work.

1.2 Technical and vocational teacher training in TVET reform processes

In the last ten years, the roles and responsibilities of teachers and trainers in TVET have changed considerably in a wide range of countries, becoming multi-functional and combining many professional elements with those of active stakeholders in TVET design and reform (CEDEFOP, 2009; ETF, 2006; Grootings and Nielsen, 2005; OECD-CERI, 2009a). The changes have challenged teacher training programmes to adopt different policies and structures so as to prepare trainers for their new and constantly evolving roles.

New learning approaches: influence on teachers' roles and training

Increase in demand for innovation and systemic reform in the area of technical and vocational training is creating new opportunities for TVET teachers and trainers to collaborate with key recipients of their services, including enterprises and their representatives. As a result, teachers and trainers are beginning to learn new learning and training approaches via different channels, for instance, through:

- synergies or mutual beneficial bridges that are created between schools at the local level with enterprises and the community at large;
- training and employment partnerships and TVET networks, including placements of teachers with local industry and services, public and private; and
- increased autonomy for schools and teachers along with improved accountability towards stakeholders, as well as students and parents.

Such changes demonstrate transparency, through reform strategies that combine vertical decentralization of decision-making regarding teacher training and curricula matters (from central/ministerial to local/institutional level) with horizontal network building at the community level. In addition, the transformation of TVET schools into autonomous professional organizations subject to government regulations, and that actively involve other stakeholders (students, parents, etc.) in the decision-making process, creates positive and motivational implications for teachers and trainers, and this includes:

- increased competencies through direct contact and internships with enterprise/workplace;
- collection of ideas for training assignments and projects through knowledge exchange and social dialogue with local enterprises;

- creation of career pathways that encourage recognition of updated training and competencies.

Teachers and trainers in TVET who are trained to meet these new challenges can be seen as key agents of change in the reform process. They contribute to designing new classroom and workshop learning in TVET schools, and also provide feedback on training as it relates to enterprise and the workplace. Therefore, active participation of teachers, trainers and instructors in the designing appropriate learning environments is critical to the development of improved TVET systems.

Change and the decision-making process: involving the teachers and trainers

TVET reform, particularly in transition and developing countries, will only be successful and sustainable if TVET policy is developed and implemented in coherence with existing TVET institutions. The concept applies as well to teacher training. In particular, reforms must draw on the experience of teachers and trainers in propelling change towards new levels of learning experiences and quality outcomes. In many countries, there has been growing awareness that teachers and trainers need to be included among the key stakeholders who decide and implement reforms and innovation, including in particular reforms dealing with teacher preparation and professional development. This comes from a better understanding of why so many education reforms across the world often have failed in the past. The exclusion of teachers and trainers in TVET as stakeholders from the reform process has repeatedly led to a failure of national reform policies to trigger real changes in TVET (Grootings and Nielsen, 2005: 12; OECD-CERI, 2009a: 75-76), mirroring findings made for education and teaching at all levels (ILO/UNESCO, 2007; 2010).

International standards on teacher preparation that also cover TVET staff at both secondary or tertiary level call for the input of current and future teachers and teachers organizations in teacher preparation programmes and institutional decision-making (ILO/UNESCO, 1966; UNESCO, 1997). TVET staff have increasingly been recognized as key agents for successful TVET reforms in their professional roles/capacities as organizers of learning (Grollman and Rauner, 2007). However, fully engaging teachers and trainers in this process involves much more than only letting them know what is expected of them, and/or simply training them to implement new policies. Effective participation in designing new teaching and learning programmes goes to the core concept of involving teachers as professionals, since they often know what will work best in meeting the particular skills needs for student populations in relation to occupational profiles in their own TVET schools, classroom environments, and the vital networks with employers and unions, parents and local school authorities/municipalities.

Their experience is therefore of utmost importance for translating general TVET policy initiatives into very divergent and vibrant real-life and real-work contexts. TVET policy-makers are advised to keep in mind that a better understanding of the roles of teachers and trainers in this important transformation process will likely have positive impacts on implementation of reform policies and for the process of TVET policy development and formulation. If such concepts are applied, TVET policy makers will find that they have “natural allies” in the teaching and training community.

At the same time, such engagement should not be unconditional. One particular risk is that teachers and trainers, especially in many developing and transition countries, often lack practical work experience and a thorough understanding of the work environments in which their students might find themselves when leaving TVET schools for work. Given that one of the core objectives of TVET reform is to link institutions more closely to the qualification needs of enterprises and other workplaces where this is not already the case, relying on teachers and trainers without this vital understanding to design and carry out programmes can have a negative impact on programme outcomes.

Moreover, employment security and tenure, important for issues of academic freedom, professional responsibility and stability in learning environments (ILO/UNESCO, 1966), may raise barriers to reforms if TVET systems do not also encourage and recognize the willingness and ability of teachers and trainers to adapt to change. Usually, after two or three years of teaching, TVET personnel in public institutions are given lifetime tenure if they satisfy established criteria.

However, such guarantees are helped by accompanying them with strong appraisal systems to ensure respect for professional standards and a certain measure of accountability to institutional norms and student expectations so as to strengthen good teaching and learning environments. This is an area where engaging teachers and trainers through their organizations via strong social dialogue mechanisms in designing and putting into place appraisal and accountability measures helps to achieve the right balance.

Recently, the OECD highlighted a clear incoherence in TVET systems (including teacher training aspects), which emphasize greater accountability and increased assessment of system outcomes yet lack research evidence and strong feedback in the evaluation processes from key actors, notably teachers and students (OECD-CERI, 2009a). Citing previous research, the OECD report noted that teaching staff are less resistant to change than is often assumed, indeed a widespread "resistance to change" view is not supported by evidence and often held as a self-evident truth, because innovation literature is produced mostly by the designers of innovation and excludes the perspective of the teachers who implement it. They may as well resist reforms out of a sense of positive commitment to the values and mission of the TVET institution, notably their own professional development and the learning outcomes of students, particularly where reforms are imposed from the top with little or no consultation (Vähäsantanen and Eteläpelto, 2009: 30). Since new ideas are the lifeblood of innovation, the OECD report calls for more space for idea generation and design of new approaches that draw on the insights of front line actors, such as teachers, trainers, learners, and business leaders. In particular mechanisms need to be established between policy makers, researchers and teachers and trainers to encourage innovation in institutions and programmes, notably those engaged in initial and continuous TVET teacher training (OECD-CERI, 2009a: 13, 54, 66, 95–96, 257).

1.3 Criteria for 'good' teachers and trainers in TVET: the training challenges

In response to the challenges facing TVET systems and their staff, as well as their initial and further preparation for evolving roles, an effort is made below to set out some criteria for excellence – what some might term 'good' teachers – as a prerequisite for defining the necessary training and qualification system that responds to such objectives.

Bearing in mind that such criteria cannot be overly prescriptive nor considered exclusive in view of the great diversity of country systems and the complexity of needs, "good" teachers and trainers may be understood as those who meet a certain number of professional criteria (ILO, 2000: 34-35; Nielsen, 2007: 58), tangible and intangible, including:

- extensive knowledge in one or more subjects or fields of learning;
- a high degree of functionality in information and communication technology (ICT) and technological processes;
- general understanding and ability to share larger economic and social realities with students;
- capacity to impart generic learning skills to students through their instruction and organization of learning processes;
- ability to function collaboratively in a team;
- research, reflection and change as necessary in teaching practice (teacher as learner);

- ability to communicate and empathize with students;
- capacity to innovate and impart innovation in learning.

Depending on the national TVET context, teachers and trainers will have gone through a number of different stages of training and have developed skills that can be measured both quantitatively and qualitatively. Identified stages that should be requirements for TVET teachers and trainers include:

- initial university, post-secondary or tertiary studies from one to three years on average;
- non-academic industry and/or service work experience of varying duration;
- pre-service teacher training in addition to disciplinary studies;
- ongoing in-service teacher training CPD.

These different stages in teacher training might be done in various combinations, although non-academic work or industry/service work is increasingly considered an essential component of TVET preparation, as is some grounding in pre-service pedagogical training and lifelong access to CPD following concepts of lifelong learning for all and the crucial need for TVET teachers to renew their skills set in the course of their teaching career.

1.4 Meeting the challenges: coherent, inclusive and high-quality systems

The aforementioned challenges, trends and evolutions of both policy and practice place considerable demands on teacher training systems in TVET. Appropriate responses to the training, curricular and pedagogical challenges of Section 1.1 could include a systematic training structure that is at once flexible and deliberate while maintaining internal and external coherence (i.e. it addresses goals within the TVET sector but also is aligned to, for example, labour market demand and general education). In addition, up-to-date curricula (as well as accompanying materials and pedagogic approaches) that are responsive to the diverse needs of individual learners are also essential requirements. The full inclusion of teachers and trainers in their relatively new roles as professional facilitators of learning and as dynamic actors in TVET reform processes in turn demands different approaches and emphases within training systems that empower teachers and trainers to fill these roles. Expanding not only the quantity but also the quality of current and future TVET teachers and trainers, in the context of evolving definitions of ‘good quality’ practice, necessitates training systems that are thoughtfully constructed with this end in mind while remaining flexible and dynamic.

It is unrealistic, however, that any national training system meets all of these challenges with efficiency and effectiveness, and does so in complete alignment with other social sectors. Moreover, there are few concrete definitions and conceptualizations of what qualifies as a ‘high-quality’ TVET teacher training system and paltry analytical assessment tools that might aid this process. This paper attempts to fill this gap by presenting a conceptualization and definition of a comprehensive teacher training system in TVET and by offering an analytical tool that may be employed by countries to self-assess their respective training systems. These, alongside their elements and implications, are delineated in the subsequent chapters.

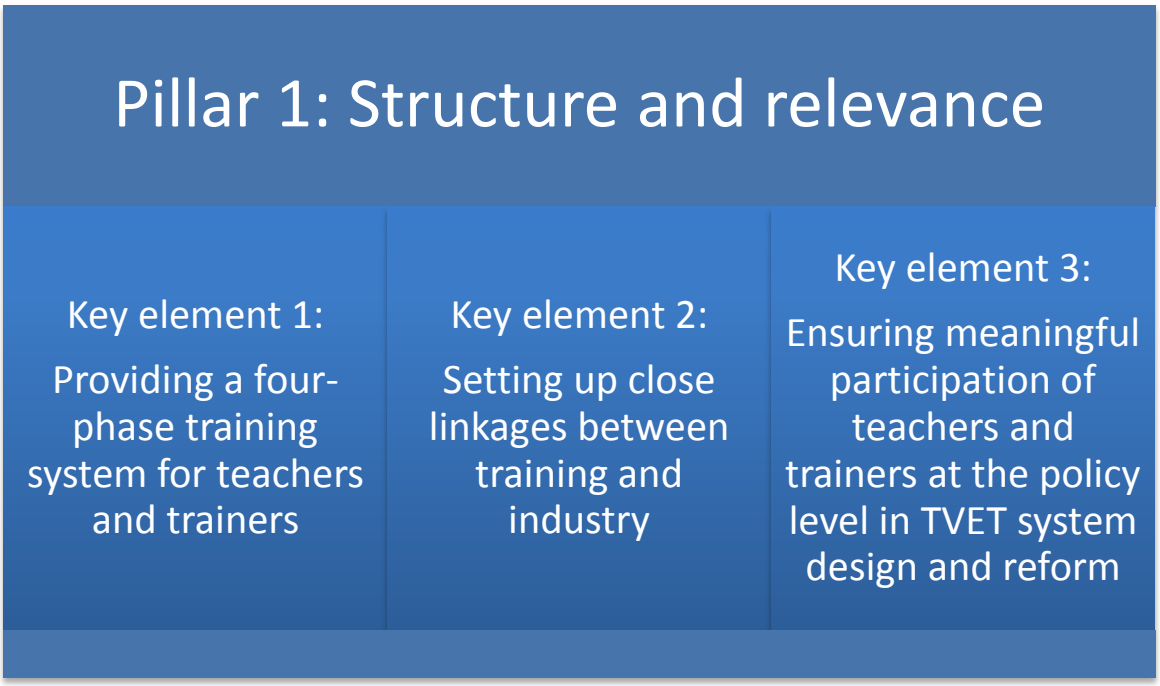
2. Four pillars and twelve key elements of teacher training systems

This chapter presents a conceptual framework and analytical tool, developed by the authors, that identifies and describes essential elements of high-quality teacher training systems. In response to the challenges outlined in the previous chapter, contemporary

TVET systems require teacher training programmes that are effective, efficient, equitable and innovative, and that are furthermore coherent with national and local objectives and the overall policy context. This paper explains how effective TVET systems incorporate four essential pillars that comprise successful teacher training systems: 1) structure and relevance; 2) responsiveness and inclusion; 3) innovation and progress; and 4) representation and communication.[5] These pillars in turn are comprised of 12 key elements of teacher training, which, if appropriately addressed, can provide the framework for a high-quality TVET system that is effective, relevant, innovative, responsive to the differentiated needs of students, and that represents a true partnership between multiple stakeholders. In addition, such a system would supply teachers and trainers with the skills necessary to be classroom leaders, innovative pedagogues, partners in policy reform and adaptive curricula designers and implementers. These four pillars and the underlying 12 key elements of teacher training are shown in Figure 2. Each pillar and element is then briefly presented in this chapter and further elaborated in subsequent chapters.

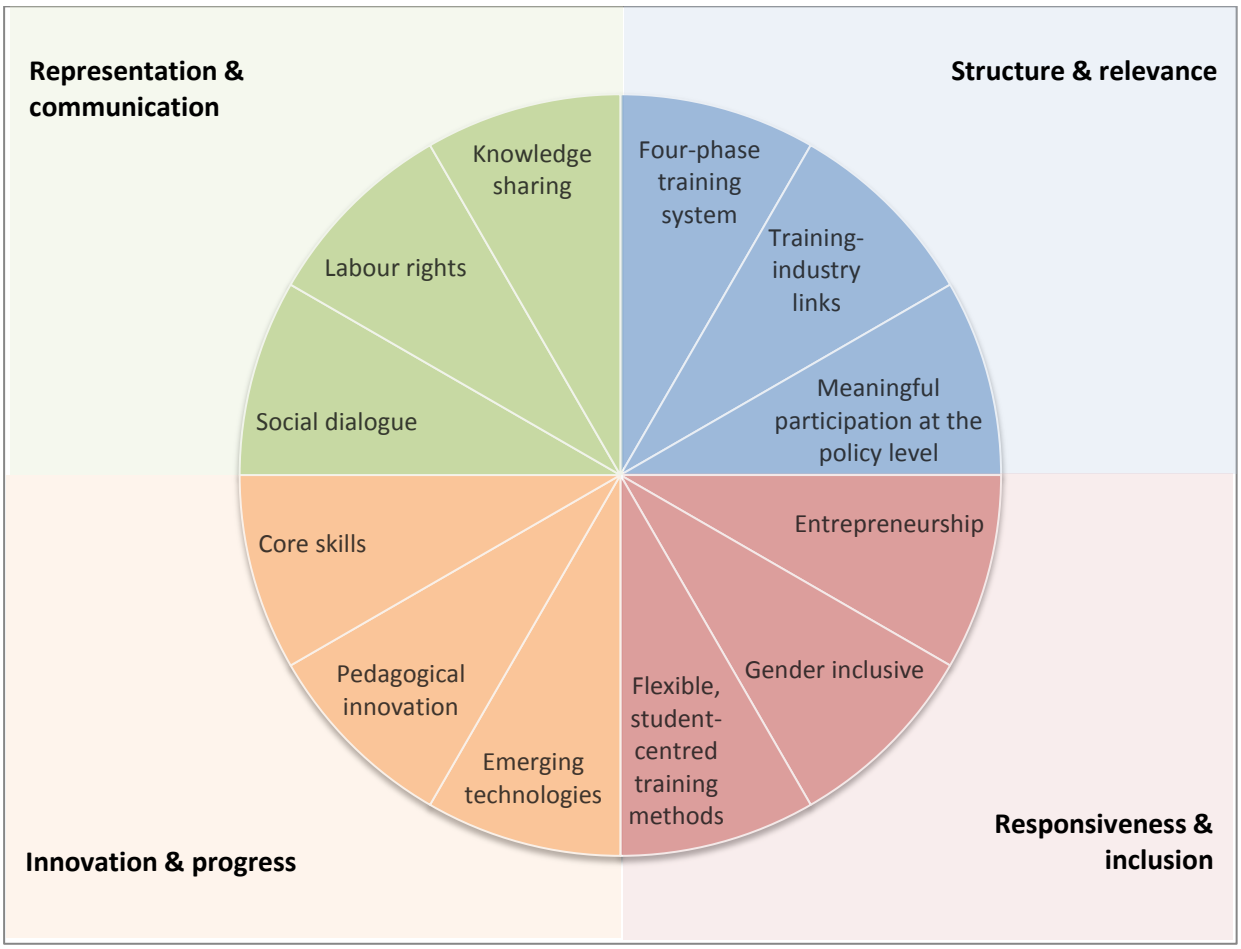
2.1 Pillar one: Structure and relevance

Effective teacher training systems are those that have a meaningful structure which includes different distinct stages of teacher preparation, those that train recruits according to good practice and in ways coherent with local contexts. This paper advocates for a system approach that incorporates both pedagogical and technical components throughout a four-phase training system that includes both initial and continued training components for teachers and trainers. In addition, both high quality and relevance are indispensable characteristics of contemporary teacher training systems.



[5] These abbreviated titles will be explained in greater depth in the following chapters.

Figure 2: Four pillars and twelve key elements of teacher training systems[6]



Key element one: providing a four-phase training system for teachers and trainers

It is essential that teachers and trainers possess both the technical knowledge of a vocation and the pedagogical capability to share that knowledge with others. Thus the structure of a teacher training system adhered to in this paper refers to the combination of integrated training components (e.g. pre-service, in-service, professional development), as well as the relative emphasis given each within the overall system. An effective, coherent structure of a TVET teacher training system will maintain some balance between initial training at a university or at the workplace, pre-service training (which in turn comprises academic coursework and practical experience) and in-service training (ILO, 2010a: 20–25). Comprehensive teacher training systems also require trainees to have gained some non-academic work experience in the public or private sphere. Support for teachers and trainers must extend beyond pre-service experience; effective training systems should emphasize the importance of CPD throughout teachers' careers. The following critical elements can be considered when assessing the structure and relevance of teachers and trainers in the TVET system:

Thus, key element one (providing a four-phase training system for teachers and trainers) comprises:

- providing initial training (either at university level or at the workplace);

[6] See Chapter 7 for a radar chart rendering of the four pillars and 12 key elements that may be used by countries to self-evaluate their teacher training systems and identify areas for development.

- requiring non-academic work experience;
- supporting pre-service teacher training;
- emphasizing CPD or in-service teacher training.

Key element two: setting up close linkages between training and industry

In principle, training-industry linkages and public-private partnerships between training institutions and companies in the private sector can foster innovation in training programmes by tapping into occupational expertise and offering dynamic opportunities to put skills training into practice in the workplace They can also facilitate the alignment of training programme output and design with labour market demand. Teachers and trainers should be well-versed in practical industry experience, trainer-industry collaboration in programme design, and/or development of private sector partnerships. National strategies and incentives for private corporations and organizations can help in this regard.

Key element two (setting up close linkages between training and industry) includes:

- establishing public-private partnerships between schools and companies;
- making workplace learning for teachers and trainers as well as their students obligatory;
- having teachers and trainers design practical experience for trainees in workplace situation through guided internships and other means;
- building on a local and trade specific assessment of why and how formal as well as informal apprenticeship systems work;
- improving the reputation and public perception of internships and apprenticeships (e.g. by considering them to be part of a national training approach in vocational education and training).

Key element three: ensuring meaningful participation of teachers and trainers at the policy level in TVET system design and reform

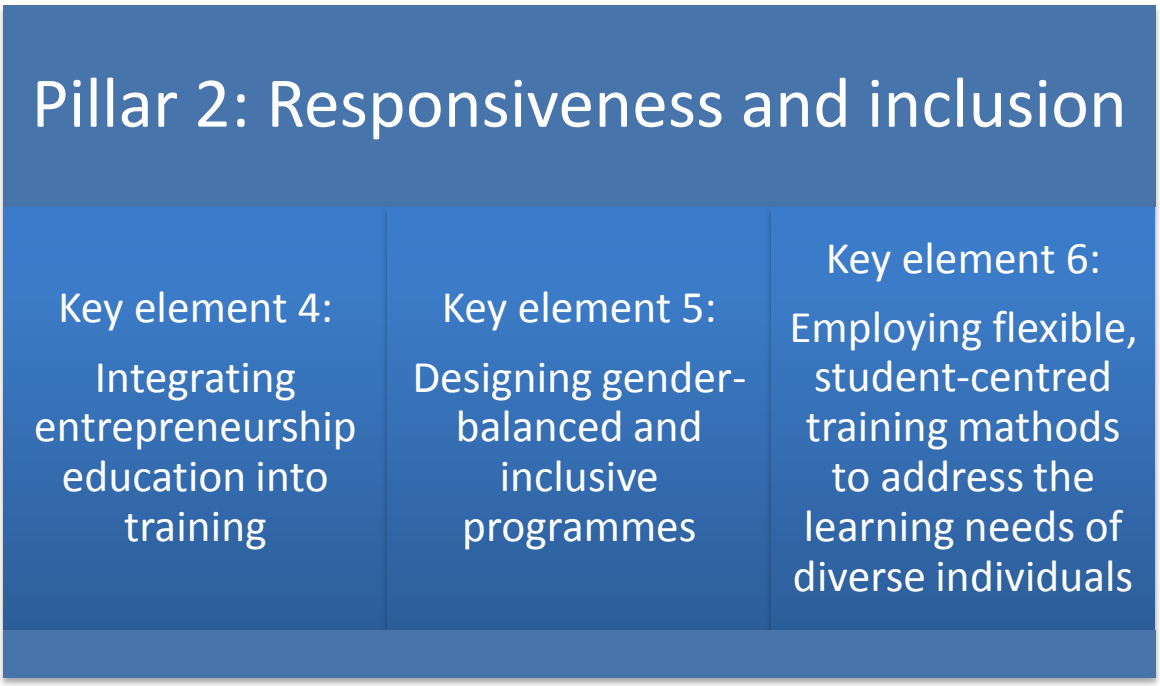
Teachers and trainers should not be viewed simply as implementers of policy, but as equal stakeholders in the design and reform of TVET systems (Grollman and Rauner, 2007). This evidently requires that teachers and trainers have the capacity to fully engage in system design and reform processes (often via collective representation) as well as a political framework favourable to cooperative problem-solving and coordinated action. Teachers and trainers are, in reality, experts on local educational issues and contexts; enhancing their capacity to fully engage at the policy level as equal partners in TVET design and reform processes is logical.

Key element three (ensuring meaningful participation of teachers and trainers in TVET system design and reform), therefore, entails:

- representing teachers and trainers in national and regional expert groups in skills development reform;
- providing training to teachers and trainers, which complements their core competencies as teachers, for example in labour market analysis, school management, working with regional employers' organizations and sectoral workers' representatives;
- involving teachers and trainers in establishing new TVET programmes, for example in pre-employment, apprenticeship or adult education;
- supporting research on vocational education and training at universities and research institutes.

2.2 Pillar two: Responsiveness and inclusion

Teacher training systems need to build the entrepreneurial capacities of teachers and guarantee inclusive teacher training systems. Students in TVET systems are not identical or replaceable widgets on a linear production line of learning; they are, rather, dynamic individuals with diverse needs and backgrounds. As such, teachers and trainers need to adopt differentiated teaching strategies and inclusive programmes that respond to unique student needs and a variety of employment tracks, including the option of entrepreneurship. Such an approach is necessary to extend educational and social rights to all persons, including those with disabilities.



Key element four: integrating entrepreneurship education into training

Entrepreneurship is a vital component to strengthening economic growth, encouraging innovation, and supporting sustainable development and the creation of decent work. The TVET system is a key venue for raising awareness about business and building entrepreneurial capacities among young people. However, this is contingent on having teachers and trainers that are well-prepared and able to effectively equip students with the business and management skills necessary to succeed as an entrepreneur.

Thus, teacher training systems should focus on key element four, integrating entrepreneurship education into training, which includes:

- highlighting entrepreneurship education and training as a key enabler in developing the attitudes and characteristics in TVET students so they may be entrepreneurial throughout their lives;
- creating awareness of enterprise and self-employment as a career option for young people;
- reviewing and updating curricula materials, delivery methods and programmes to help determine how best to integrate entrepreneurship into the curriculum;
- equipping teachers from diverse fields with the skills needed to teach entrepreneurship utilizing interactive and participatory learning methodologies.

Key element five: designing gender-balanced and inclusive programmes

While international agreements have long asserted women's equal rights to educational and labour market opportunities, gender parity has not been attained in practice in many contexts due in large part to powerful social and cultural norms (ILO, 2009d). However, the meaningful inclusion of women in TVET teaching and training systems as trainers and trainees is not only a rights-based argument: it also holds great promise for household income generation, micro-economic activity in local markets and aggregate economic growth for societies. As a part, whether formal or informal, of the national education fabric, TVET systems have a societal obligation to provide gender-balanced and inclusive programmes, both for teacher and students. This includes encouraging the recruitment and retainment of female trainers, challenging stereotypes of 'traditionally feminine' occupations and establishing professional support systems that are gender-responsive.

Key element five (designing gender-balanced and inclusive programmes) encompasses:

- providing a gender-responsive incentive system for trainers;
- including women and men in non-traditional occupations;
- establishing support services to increase participation and success;
- introducing quotas for female participation as trainers;
- involving female trainers in emerging sectors not yet defined by gender (e.g. information technology, green jobs).

Key element six: employing flexible, student-centred training methods to address learning needs of diverse individuals

The principle of inclusion is not limited to gender-responsiveness, but also extends to persons with specific training requirements for much the same rationale as stated under key element five. There are many groups of individuals who are typically marginalized from mainstream formal educational systems and who should be included based on human rights and ILO Conventions as well as sound economic arguments (ILO, 2004: 6). Teacher training systems should be flexible and adaptive, able to accommodate the needs of diverse individuals.

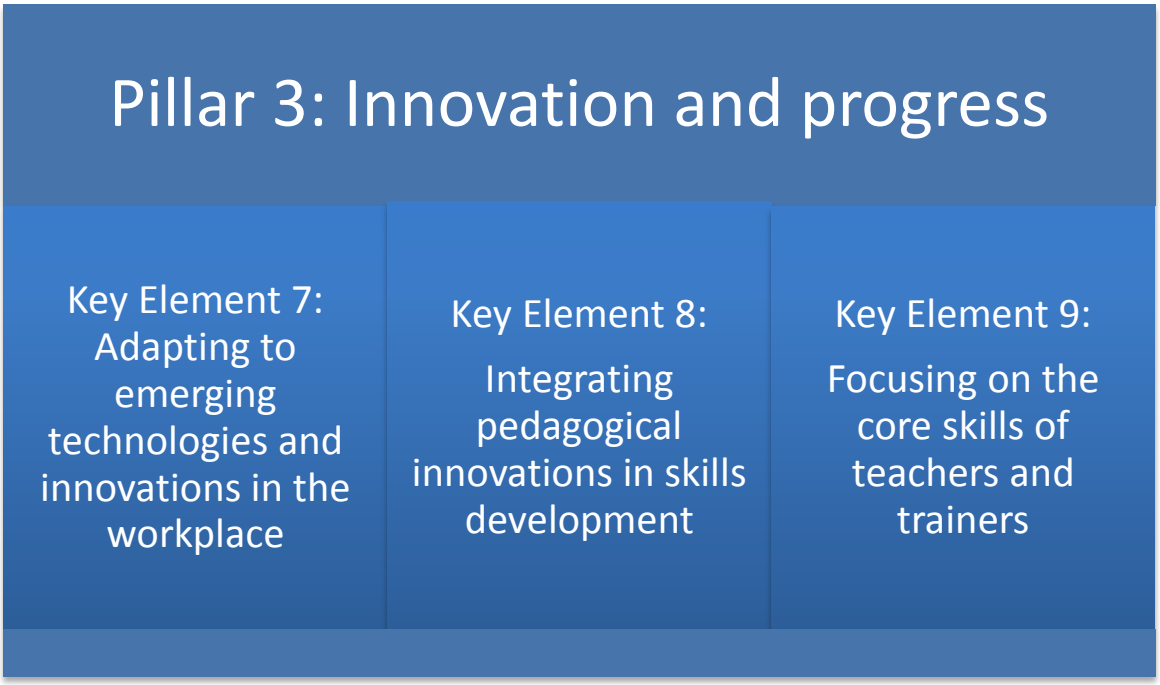
As such, key element six (employing flexible, student-centred training methods to address learning needs of diverse individuals) involves:

- including people with disabilities which allows for positive modelling and facilitates greater programme responsiveness and acceptance;
- targeting teacher training in crisis-affected populations towards income generation and portability of skills and holistic skills development;
- promoting inclusive training for people with disabilities and changing attitudes and preconceptions;
- providing additional support for those with specific training needs (e.g. for example in learning styles, accommodation and financial support);
- including a focus on specialized skill development (e.g. literacy training and entrepreneurship);
- developing an incentive system for teachers in rural communities.

2.3 Pillar three: Innovation and progress

In order to remain relevant to market demand and technological changes, teacher training systems should incorporate innovative practices, both in course content and

instructional pedagogy, into existing programmes. Thus innovation is applicable in addressing both 'what to teach' and 'how to teach.' Teachers must be exposed to and trained to utilize emerging technologies in the classroom through systematic and CPD. In addition, the concept of innovation should extend to pedagogical practices in the classroom; teachers and trainers should be encouraged and supported as they incorporate innovative instructional methods to meet the needs of trainees and integrate emerging technologies into curricula in new ways. Innovative partnerships between training institutions and industry are also key mechanisms for acquiring practical knowledge and experience. It is important to note that the concept of innovation as used here may refer to completely new technologies, instructional methods and training-industry linkages, those that are new only to vocational education, or those that have not yet been implemented in a particular context (OECD, 2010).



Key element seven: adapting to emerging technologies and innovations in the workplace

Technology changes rapidly in all labour markets, even if what counts as 'emerging technology' is plastic relative to the current state of technology in particular country contexts. In order for trainees to understand and engage with emerging technologies in the workplace, TVET teachers and trainers should also be exposed to, and familiarize themselves with, emerging technologies, including but not limited to ICT. On the other hand, technology should not be incorporated for its own sake as a curricular add-on; rather, technology should be pursued in the same vein as other instructional methods and curriculum modifications. As such, meaningful engagement with and knowledge of technology for the amelioration of the learning environment and training programmes should remain the goal (ILO, 2012c: 138–139). Moreover, emphasis should be placed on teachers' transferable skills and their adaptability to emerging technologies.

Therefore, key element seven (adapting to emerging technologies and innovations in the workplace) should comprise:

- exposing teachers and trainers to latest information technologies (IT);
- preparing teachers and trainers to use emerging technologies in the classrooms and in workshops;

- providing spaces in CPD for teachers and trainers which will allow them to regularly upgrade their technology skills.

Key element eight: integrating pedagogical innovations in skills development

In addition to the content of skills training and development (i.e. course content), TVET programmes should encourage innovation in instructional methods and pedagogical processes in order to better facilitate knowledge acquisition and to effectively engage previously marginalized groups (OECD-CERI, 2009a).[7] Teacher training systems should support instructors to make training opportunities participatory and collaborative, and CPD should be geared toward this end. Innovation and experimentation in teaching approaches should also be encouraged, in conjunction with systematic reflection on one's practice.

Key element eight (integrating pedagogical innovations in skills development), therefore, should encompass:

- supporting teacher and trainers moving away from being 'sheer lecturers' towards becoming 'facilitators of learning processes';
- experimenting with new and innovative teaching methods in TVET teaching;
- learning how to teach specific groups (for example people with disabilities, migrant workers, people in rural areas) with new participatory teaching methods.

Key element nine: focusing on the core skills of teachers and trainers

Teaching and adequately preparing TVET students to fully engage in the labour market is an extremely complex vocation. Teachers and trainers in TVET, as in general education, are no longer viewed as imparters of knowledge who instill content knowledge into their pupils; rather, they are to be innovative pedagogues who facilitate the processes of knowledge acquisition and utilization. Hence, teachers and trainers in TVET require more than just content knowledge to fulfill these new roles and expectations. It is incumbent upon teacher training systems to adequately prepare teachers and increase their capacity to act and perform as professionals. Though teachers' content knowledge and subject-matter expertise should not be eschewed, training systems should also provide opportunities for future teachers and trainers to obtain practical, technical, pedagogical and academic skills that directly correspond to their field of work, as well as opportunities to exercise them (ILO, 2012c: 75). Teachers' skills sets, therefore, should not be seen as static and permanent, but rather as flexible, portable and transferable.

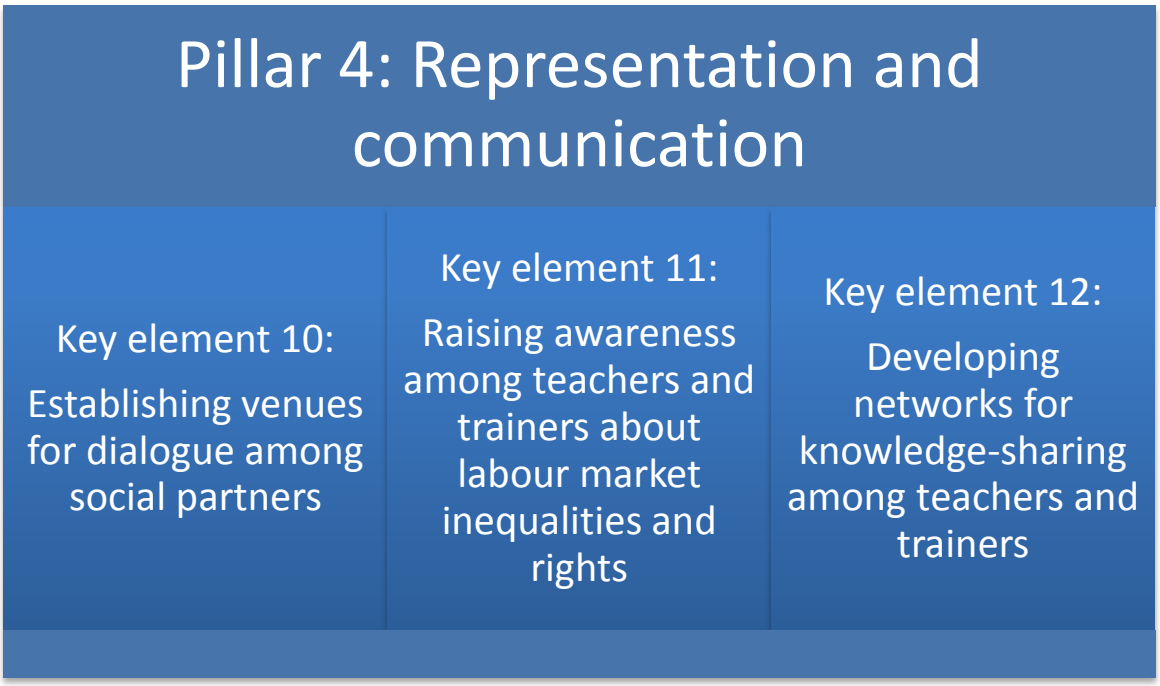
Key element nine (focusing on the core skills of teachers and trainers) therefore encompasses:

- providing practical, technical, pedagogical and academic skills sets to teachers and trainers that directly respond to their field of work;
- allowing for teacher training programmes, in which skills are transferable across content areas and contexts;
- anticipating skills needs for teachers and trainers on an ongoing basis and adapting these programmes to technological, societal and other changes.

[7] See also key element six.

2.4 Pillar four: Representation and communication

Communication among social partners is a central tenet of the ILO and is essential for establishing educational policies and practices that meet the needs and concerns of all stakeholders. It is a positive means by which to develop collaborative solutions to common problems and issues and, by definition, engenders cooperative working relationships between diverse groups of actors. Collective bargaining can be a valuable tool for TVET teachers and trainers in negotiating important issues relating to conditions of work. Social dialogue, as conceptualized by the ILO, is understood to mean all forms of information sharing, consultation and negotiation between educational authorities, public and private, and teachers and their democratically elected representatives in teachers' organizations (ILO, 2003a). This inherently includes the establishment of mechanisms and venues for dialogue among stakeholders, the capacity of all actors to meaningfully engage in such dialogue and other knowledge-sharing platforms.



Key element ten: establishing venues for dialogue among social partners 'on' and 'in' teacher training

Effective and meaningful social dialogue necessitates, firstly, the proactive establishment of policy mechanisms and venues in which all actors in teacher training may convene to develop solutions to common issues and concerns. Policies must encourage and incentivize relevant stakeholders to come collectively to the table and collaboratively find solutions that are mutually agreed upon. Here we can also differentiate between social dialogue 'on' and 'in' TVET: the former referring to mechanisms that serve to align TVET provisions with market needs and the latter concerning dialogue mechanisms between actors within the TVET system itself (e.g. school boards, private employers and their representatives, teachers and their unions, households, governments) (ILO, 2011b: 11).

Key element ten (establishing venues for dialogue among social partners 'on' and 'in' teacher training) calls for:

- using sectoral-level social dialogue mechanisms to help align TVET provisions with labour market needs;

- establishing social dialogue mechanism in TVET in school boards and with private employers, teacher unions and parents;
- granting more ownership to teachers, trainers and directors in TVET and creating a sense of ownership of decisions.

Key element eleven: raising awareness among teachers and trainers about labour market inequalities and their own labour rights

Effective social dialogue, whereby all actors meaningfully engage in policy design, not only requires the establishment of mechanisms and venues that encourage and facilitate dialogue among representative groups as mentioned above, but also that all actors have the capacity to fully engage in this process. This in turn necessitates that all parties possess knowledge of labour market and educational rights and issues (ILO, 2012c: 201-212). Such capacities are not the norm; often teachers, teachers' organizations, community groups and parents are not well-informed of either. As such, capacity building and awareness-raising among social partners and stakeholders is frequently warranted.

Thus, key element eleven (raising awareness among teachers and trainers about labour market inequalities and their own labour rights) involves:

- Providing training programmes for teachers on understanding regional and national labour market information;
- Including workers' organizations, parents' associations, youth groups and other communitiy groups in these training programmes, allowing them to adress their concerns;
- Combining different elements in teacher training policies and including elements addressing aspects of decent work deficits, such as remuneration, tenure and other working conditions.

Key element twelve: developing networks for knowledge-sharing among teachers and trainers

A complement to social dialogue is the creation and maintenance of knowledge-sharing networks between teachers and trainers at the local, regional, national or global levels. These networks can serve as platforms for the professional exchange of ideas and best practices, as well as for the expansion of access to relevant training resources and professional development opportunities. Ideally, knowledge-sharing networks also facilitate professional collaboration between teachers and trainers who are working in a common geographic area or particular context, thereby creating a collaborative community of practitioners organized around the development of solutions to common issues and sharing best practices (for examples see Annex 11).

Key element twelve (developing networks for knowledge-sharing among teachers and trainers) requires:

- utilizing online discussion forums and e-learning courses to improve and increase access to relevant resources and professional development (where internet is accessible);
- making available information on national, regional and local resources for knowledge-sharing. A few examples of resources include, newsletters on the topic of vocational teacher training, and other media channels where teachers and trainers are kept informed of current work in their field;
- facilitating the exchange of ideas and the creation of a community of practitioners;
- sharing knowledge in networks may increase recruitment and retention rates among the TVET personnel;

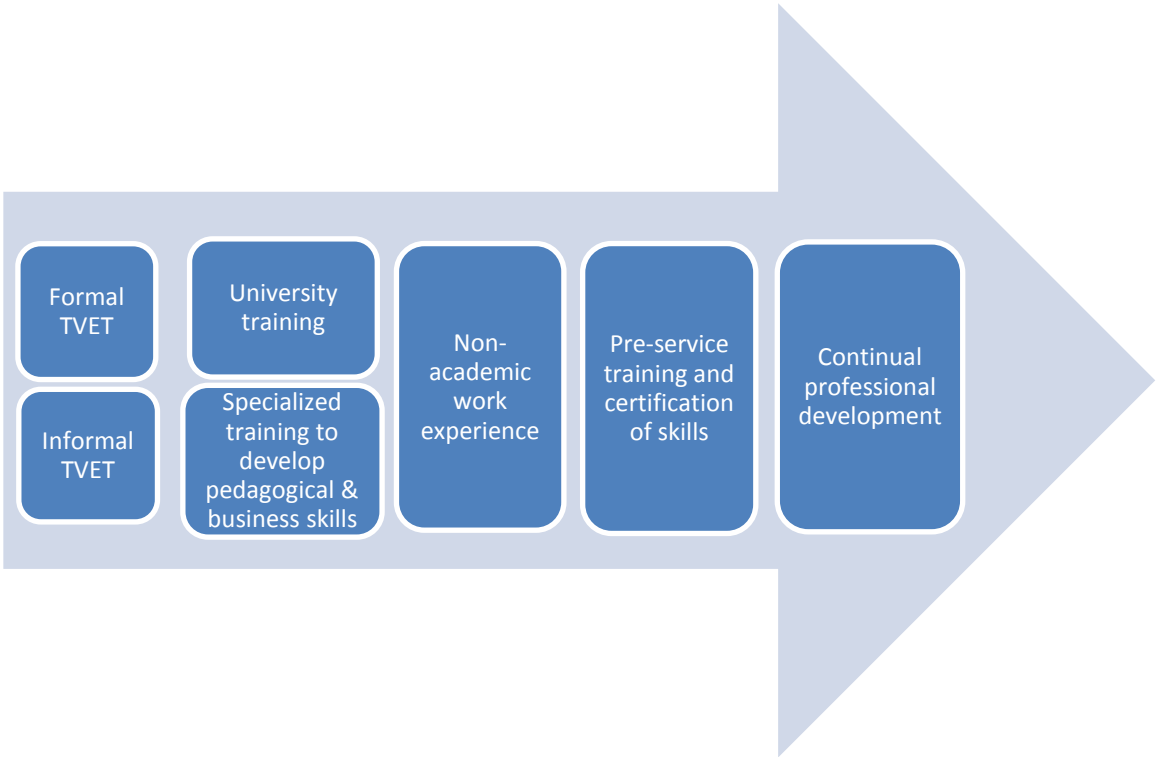
- enhancing local TVET networks to address teacher shortages through mentoring programmes and targeted recruitment.

3. Pillar one: Structure and relevance

3.1 Key element one: four-phase training system

Given the variety of contexts for TVET in the formal and informal economies, there exists a wide range in the level of preparation and skills development for teachers and trainers. This section aims to set forth a general framework for the stages of training and the applicability of each component for TVET instruction. Though there is certainly a level of variance both from the formal economy to the informal economy as well as within each one, there are nonetheless key competencies applicable to all teachers and trainers. Figure 3 provides an overview of the possible stages of training for each sub-system. These different stages in teacher training might be done in various combinations, although non-academic work or industry/service work is increasingly considered an essential component of TVET preparation, as is some grounding in pre-service pedagogical training and lifelong access to CPD following concepts of lifelong learning for all and the crucial need for TVET teachers to renew their skills set in the course of their teaching career.

Figure 3: Training framework for TVET trainers, formal and informal



As previously mentioned, it is essential that teachers and trainers possess both the technical knowledge of a vocation and the pedagogical capability to share that knowledge with others. Both competencies are equally important. This is in line with the conclusions of the Global Dialogue Forum on Vocational Education and Training (ILO, 2011b) which state that "….teachers and trainers should have qualifications as expert teachers – with both technical and pedagogical skills – and experience in industry and other workplace needs", including generic skills such as communication, problem solving, teamwork, languages and entrepreneurial skills. However, in formal TVET teacher training, there is often greater

attention given to academic training whereas non-academic work experience does not merit the same emphasis. In informal TVET, the reverse is often true: teachers and trainers acquire greater levels of work experience and less academic training.

Initial training for TVET teachers: formal university or tertiary training programmes

Many university or other tertiary programmes exist to prepare TVET personnel for their tasks. Programmes range from doctoral to master's programmes, bachelor and associate degrees. Specific qualifications required for entry into the formal TVET system vary greatly by country; the requirements regarding the formal entry qualification and licensing for TVET teaching positions are normally set by national legislation.

Master's degree programmes in Australia and in some other OECD countries combine theoretical studies of a vocational discipline with general and/or vocational pedagogy. Other programmes at the master's degree level are not necessarily designed specifically for TVET teaching and training, and graduates of these programmes may only decide on a career in TVET after graduating from university. Such entry paths were previously the rule in many South East European countries before reforms in vocational teacher training beginning in the 1990s (Nielsen, 2007: 68). There is also recent evidence that indicates university programmes in OECD countries are shortening due to the re-organization of masters and the introduction of more bachelor programmes, including in TVET (Grollman, 2009).

As a consequence of the Bologna Declaration of June 1999, the European Union took the initiative to create a European Higher Education Area (EHEA) with comparable degrees organized in a three-cycle structure of bachelor (3–4 years), master (1–2 years) and doctorate. The initiative was also driven by the European Union (EU) vocational training policies with a focus on the Lisbon objectives and the Copenhagen process, with the result that European countries have increasingly developed bachelor programmes for TVET teaching and training in the last ten years. These combine theoretical studies in a vocational discipline with an accompanying syllabus in pedagogy and other studies and cover a three-year period of university studies (EC, 2010).[8] Associate degrees (e.g. two-year programmes within a bachelor degree) mark the lowest academic university programmes for TVET teaching and training in developed countries. Combined with relevant work experience in a specific vocational discipline, they can nevertheless lead to entry level qualifications for TVET teaching and training (e.g. community colleges in the USA).

Developing countries at the same time are increasingly looking to upgrade pre-service training standards. In Ethiopia, Indonesia and Malaysia, for example, PhD programmes in TVET are currently being discussed and efforts are being made to develop transnational standards for PhD programmes in TVET research with a focus on multidisciplinary and industrial orientation (TT-TVET, 2008).

Non-academic work experience

In a few countries an additional entry qualification for TVET teaching has been introduced in the form of significant non-academic work experience, for example participation in internships or apprenticeship programmes. Some countries require the combination of a Master's degree plus non-academic work experience, for example Austria, Denmark, Germany and Luxembourg. On the other hand, future TVET instructors, i.e. those with considerable work experience in technical disciplines as master artisans need to

[8] A new European Higher Education Area was launched in March 2010 in the Budapest/Vienna Declaration by EU Ministers.

take additional pedagogical training. Furthermore, a few countries have started to develop specific teacher training programmes for up-skilling of individuals with industry experience (for example mid-career engineers) and have designed programmes for the transition of individuals with industry experience into the TVET teaching profession. Among these countries are Denmark, Germany, Ireland and the Netherlands. In Germany, a reform in the Vocational Training Act in 2005 now allows for engineers and technicians to enter the TVET teaching profession (BMBF, 2005).

In summary, initial education standards and entry programmes vary by country and at least in developed countries range from an upper level requiring a master's degree from a university plus up to six years of academic or non-academic work experience to a bachelor's or even an Associate degree with little or no work experience. Trends in TVET teacher training in OECD countries, especially in the European countries seem to indicate that university programmes are becoming shorter (due to the re-organization of masters and the introduction of more bachelor programmes, including in TVET (Grollman, 2009), and that some countries tend to deal with immediate TVET personnel shortages by designing specific programmes for individuals with industry experience, as mentioned above.

Pre-service teacher training for TVET

The objective behind a solid pre-service training for TVET teachers and trainers is to lay the foundation for the building of professional capabilities in TVET teaching, including self-organization, combining practical and theoretical aspects of teaching and practising multi-disciplinary teamwork. This constitutes a valuable opportunity to integrate awareness training for teachers about the needs of specific groups as discussed in greater detail under Pillar two (Responsiveness and inclusion).

In general, pre-service training for teachers and trainers in TVET remains the exception rather than the rule, though some countries and institutions emphasize such preparation as a foundational aspect of their training policy. Notable examples include: 1) an innovative vocational teacher training module, Duale Trajecten BE, developed by the Fontys teacher training college in the Netherlands (Cort, Härkönen and Volmari, 2004); 2) a strong TVET pre-service teacher training tradition in Germany; 3) a diversified programme in Saudi Arabia tied to an ambitious recruitment programme (see Annex 1); and 4) ETF experiments with pre-service vocational teacher training reform in Macedonia based on the Fontys model (Nielsen, 2007: 61).

Where they exist, these programmes can vary in length from three months to two years and are usually looked upon as a training or apprenticeship period for future TVET teachers and trainers. The focus of pre-service teacher training usually is placed on developing professional skills and other learning areas:

- vocational pedagogy and didactics;
- selecting and mastering appropriate work forms and media;
- improving professional communication (with students, teachers, employers, unions, etc.);
- accompanying individual and social processes of students (e.g. peer group learning and learning groups);
- non-instructional aspects (e.g. TVET administration, time management, contacts with stakeholders, counselling, vocational guidance).

Pre-service programmes usually combine time spent as prospective TVET teachers in vocational schools and in vocational education teacher training institutes with a focus on the experience of teaching situations, teaching supervised by experienced TVET teachers and in group situations with peers. In vocational disciplines, trial-run teaching situations,

where teaching takes place in front of teacher trainers and peers with results discussed at the end of the trials, is strongly emphasized (Axmann, 2002).

Completion of TVET pre-service teacher training can then be validated by state board licensing examinations (e.g. in Austria and Germany[9]) which verify the qualifications and results of prospective TVET teachers. The exam(s) result into an accreditation to new TVET teachers which in part determines their future career path in the TVET system.

Continuing professional development

Continuing professional development (CPD), which includes but is not limited to in-service training, constitutes a fundamental and increasingly important link in the TVET teacher/trainer learning chain. Without continual updating of knowledge, skills and competencies, TVET teachers and trainers run the risk of their skills becoming rapidly obsolete. Yet there may be good reason to suspect that CPD constitutes one of the weakest links in the chain. It is often ad hoc, with little input from teachers and is connected to neither career progression nor collaborative networking possibilities (ILO/UNESCO, 2010: 20). Some countries, largely high-income, have specifically targeted such gaps (e.g. France, Hungary, Italy and Ireland). In Ireland, for example, an institute has been dedicated to supporting vocational research as well as in-service teacher training in this area (CEDEFOP, 2009: 95, 111). Nonetheless, universal and sustained access to CPD is not a given, even in developed countries.

In-service teacher training for TVET personnel can be a practical solution contributing towards increasing levels of professionalism among teachers and trainers, and to flexibly respond to personnel needs. In addition to its importance for national systems, such training is also a part of the technical cooperation work of stakeholder international organizations, including the ILO's work on skills development (e.g. Bangladesh – ILO, 2010d) and EU support to prospective candidate countries (e.g. Bosnia/Herzegovina, Croatia, Estonia, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Serbia and Slovenia) through programmes such as CARDS and TACIS[10] (Grootings and Nielsen, 2005; Nielsen and Nikolovska, 2007). In other countries (e.g. Austria, Denmark, Finland, Germany, Luxembourg) a certain number of in-service teacher training days in TVET are required by national legislation and are linked to career paths and advancement within the profession.

The relevance of CPD, in-service or otherwise, to TVET is accentuated by the technological basis of such training, its complexity and constantly evolving nature. ICT-based learning is a case in point. Teachers and trainers are increasingly required to incorporate ICT in classroom or internet-based learning approaches and to organize participatory learning with distance-learners, who may comprise a more diverse group in terms of age, ethnicity and educational background. Moreover, 'blended learning' (i.e. the combination of distance learning elements and in-class phases) for teachers and trainers has been asserted as a means of CPD delivery for TVET programmes. In Hungary, ICT capacity is now a requirement of all industrial and vocational teachers, supported by a special information technology programme in vocational schools, curricula and training to support virtual learning environments (CEDEFOP, 2009: 95; ETF, 2006).

Countries noted above that have implemented in-service teacher training programmes for TVET staff at the national level have systems that usually operate either within the framework of Ministries of Education (exceptionally also with Ministries of Labour), with

[9] For a specific example of pre-service trainer for TVET teachers in Germany, see Annex 3.

[10] CARDS stands for Community Assistance for Reconstruction, Development and Stabilization and TACIS for Technical Assistance to the Commonwealth of Independent States, both of which were EU reform programmes in the countries of former Yugoslavia and the former countries of the Soviet Union (Commonwealth of Independent States).

national TVET centres or as part of national or regional centres for teacher training. National centres often play an important role in supporting teachers with training that enhances their capacity to adapt to change and increase professional development (for example in Slovenia, see: CPI, 2007).[11]

Assessment of TVET personnel

One of the critical, but often overlooked aspects of professional development is teacher appraisal. International standards and recommendations of the ILO set a conceptual goal for teacher appraisal in terms of encouragement and help to teachers, those in general education as well as in TVET, to effectively carry out their professional performance in ways that do not diminish their "freedom, initiative and responsibilities" (ILO/UNESCO, 1966: 8). The standards moreover set out basic criteria for objectivity, transparency, communication with teachers and rights of appeal of unfavourable assessments in the teacher evaluation process. ILO constituents have agreed that such appraisal should be largely diagnostic and formative, identifying weaknesses so as to improve performance for the benefit of learners, based on holistic criteria that reflect all the variables in a school setting which affect teaching and learning (ILO, 2000: 35).

In principle, assessments can be made at each level of the training and employment cycle for teachers and trainers in TVET. University degrees are completed and assessed within the tertiary system of education and are brought to TVET institutions as initial qualifications for entry into the system. Work experience for TVET teaching can be counted in terms of qualitative and/or quantitative work certificates received for internships, apprenticeship programmes or for other extended work experiences.

At the end of pre-service training programmes, a final exam can be carried out and build the basis for career paths and professional development of TVET teachers and trainers. Pre-service teacher training can consist of a combination of the following assessment tools:

- graded teaching samples of TVET teaching in real class situations;
- written and oral exams in applied vocational teaching;
- planning, carrying out and evaluating a sequence of lesson plans.

In many, if not all TVET systems, regular assessments continue after initial entry qualifications into TVET teaching have been met and often consist of regular (i.e. every three to five years) observation of TVET teachers and trainers. Assessments may lead to tenure and usually serve as a basis for career positions. In some countries, they are carried out by the respective ministries of education or by pedagogical institutes, by teacher supervisors or by directors/principals of TVET institutions. In many cases they are the basis for promotion and career development.

Skills development for informal trainers

Currently there is limited information available on initial training and educational levels of teachers and trainers in the informal economy. However, this area has begun to receive more attention in recent years given the extent to which the informal economy is responsible for training in many developing countries. Though not the only form of training in the informal economy, one of the most prominent is the informal apprenticeship, defined

[11] Programmes may also be implemented in cooperation with enterprises that offer their premises in order to improve the quality of TVET training and in trades where employers are anxious to ensure a supply of promising future graduates for booming industries or services. One of these in-service initiatives within the European Union cooperative process is described in Annex 2.

as "a 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" (ILO, 2012d).

Trainers in the informal economy are often practitioners, business owners, and the like; training comprises just one of their many on-going responsibilities. As such, flexible approaches are required to allow them to upgrade their teaching capabilities as needed. In particular, courses targeting technical, business or teaching skills are beneficial for master craftspersons. These courses should be short or part-time in nature so as not to jeopardize business operations. Since many master craftspersons may never have attended formal training, special trainers are required to cater for their particular needs; additionally incentives such as certificates may be useful to motivate them. Besides training, linkages to larger enterprises and improved access to modern technology enhances skills development in workplaces that offer informal apprenticeship (ibid).

A number of initiatives aimed at developing skills of master craftspersons have been undertaken specifically across Africa where informal apprenticeships contribute largely to skills acquisition. These include a project initiated by the Intersectoral Craftworkers Association (Groupement interprofessionnel des artisans – GIPA) in Cameroon, donor-funded endeavours such as the Integrated Training and Entrepreneurship Promotion Programme in Tanzania supported by German Technical Cooperation (GTZ)and the Vocational Skills and Informal Sector Support Project in Ghana supported by the World Bank as well as locally-supported projects such as the Skills Upgrading Project in Kenya developed by the Kenyan non-governmental organization (NGO) SITE – Strengthening Informal Training and Enterprise (see Box 2 and Annex 2).[12]

3.2 Key element two: training-industry links

One of the key elements of the proposed system focuses on the importance of training-industry linkages, and the importance of vocational teachers in linking their own students to trainings, and other industry related opportunities in the work place.

What is really important is the development of industry-specific training for future teachers in vocational education and training. This can be done through guided internships with specific tasks during a bachelor or a master degree programme or alternatively before a university degree in TVET teaching through apprenticeship programmes in the relevant field of vocational education and training; for example and apprenticeship programme in becoming a bank clerk for somebody who will teach business administration or an apprenticeship in IT software design for somebody who will later take an engineering degree as an IT specialist in software design.

As much as a combination of school and work-based learning is important for students in vocational education and training, it is also equally important for the teachers and trainers in TVET. This does not only apply to the preparation period, but it also applies to life-long learning of vocational education and training and can be done through in-service teacher training practices, such as industry secondments or recurrent internships during the whole life-time of a TVET teachers' work-life.

[12] For possible learning outcomes at different stages of TVET teacher training with respect to university studies, non-academic work experience, industry and service work experience, pre-service teacher training and in-service teacher training or CPD, see Annex 4.

Box 2: Skills upgrading for master craftspersons in Tanzania

The Vocational Education and Training Authority (VETA) in Tanzania, in cooperation with the German Technical Cooperation (GTZ), introduced the "Integrated Training and Entrepreneurship Promotion" (INTEP) programme in 1998-2001. The programme aimed to improve informal apprenticeship through upgrading technical skills and training capacity of craftspersons. INTEP conducted training needs assessment, analysed the local labour market, designed an integrated training approach (including technical, management and literacy skills) and identified local trainers to deliver short training courses in different trades: food preparation, mushroom growing, carpentry finishing, vegetable and plant nursery, oil pressing and building.

The approach proved successful in that it increased the quality of goods and services produced in small businesses, along with sales and profits. A participatory approach to plan training content proved to be important, as did mixing business skills with technical training and literacy skills.

An assessment concluded that it would have been more effective to develop separate training packages for master craftspersons and workers. They were trained jointly, but were found to have different training needs. All training was subsidized, although trainees had to contribute either with their travel, lunch or a small fee. As subsidies were provided by GTZ, INTEP courses were drastically reduced when donor funding expired.

Source: ILO, 2012d; Haan, 2006; Johansen and Adams, 2004.

Ensuring that training equipment is properly maintained and replaced as needed is also important both to health and safety and to quality of training. Much of TVET provision requires greater investment than conventional academic subjects in suitable training premises, purchase of equipment and consumable training materials, yet chronic under-investment prevails, particularly in transition and low-income countries (Masson, 2006: 9; UNESCO, 2010: 84–86). To some extent this can be tackled through establishing strong industry-education links, though this appears to be a feature of more developed economies, largely as a result of the practicalities and costs of doing so.

Companion strategies advocated in OECD countries such as Mexico and the Netherlands encourage recourse to part-time and flexible working arrangements that permit exchanges between institutional teaching and training staff and enterprises to solve staffing problems and to enrich teacher/trainer competencies – TVET staff obtaining valuable workplace experience and industry trainers developing better pedagogical skills (see, for example, van Liemt, 2012). Such arrangements should not have the effect of diminishing the status of either category of teachers/trainers. They may also serve to enhance TVET cooperation with private enterprise, as for example the Telkkä exchange and placement programme in Finland which involves TVET teachers and workplace trainers that is cited for its positive benefits for participants' skills, self-esteem and knowledge-sharing (OECD-CERI, 2009a: 51, 53-54).

An unpublished ILO study on teachers and trainers in the tourism sector in South Africa (ILO, 2012e) points, in its key recommendations, towards more work experience for teachers and trainers, because the majority of lecturers in the tourism sector do not have substantive industry experience. This lack of experience is also the reason why employers (and their organizations) are in strong support of introducing more mechanisms of social dialogue and to introduce more work place learning into tourism programmes in order to link education and training more strongly to employment paths in tourism and hospitality in South Africa.

A recent report conducted for the ILO on sectoral training and employability in India highlighted the role that public-private partnerships and training-industry joint ventures play in funding vocational education and training, as well as increasing the supply of skilled workers (see Box 4).

Box 3: Improved linkages between TVET and enterprises in Bangladesh

The TVET Reform Project aims to enhance productivity and improve competitiveness by bridging the current gap in Bangladesh between the supply of skilled workers and the increasing needs of the labour market. Enhanced productivity and competiveness relies on the strength of the relationships between TVET institutions and employers, which enable high quality, practical skill development and workplace learning.

Progress made

To decide which industry sectors the TVET Reform Project would focus on, the Bangladesh Institute of Development Studies were commissioned to map the economy and identify the key growth and export-oriented industry sectors and their demand for skills. Based on this, four priority industrial sectors (IT, Transport Equipment, Leather and Food Processing) were selected. Tourism and Hospitality was also added later.

A training needs analysis was then conducted to identify key areas which needed improvement; these areas included productivity, management, supervision, train-the-trainer and leadership development. After further sector studies, training sessions on enhancing workplace skill and productivity were tailored; in the period 2008–2009 they were delivered to over 500 representatives from the public and private sectors.

A number of key industry stakeholders and local TVET practitioners then took part in regional fellowships which showcased effective working examples of different aspects of TVET in regional countries.

Current and future activities

Industry Skills Councils were created in each of the priority sectors, bringing together the representatives of different associations and key stakeholders to discuss sector development issues and provide guidance to the TVET Reform Project. It was also ensured that employers and workers contributing had direct input into the national TVET policy development committee, skills standards drafting committees and the qualifications development committees.

Industry-driven Centers of Excellence have been established by the Agro Food and Leather Industry Skills Councils. The Centre of Excellence for Leather has been particularly active, not only in implementing apprenticeship programmes for machine operators and trainee supervisors but also in recently signing a Memorandum of Understanding with the United States Agency for International Development (USAID) which provides the financial and technical assistance to train 1000 individuals as well as help to build its capacity to become operational and eventually self-sustaining.

Short cost-shared training courses in response to industry needs are continuing to be provided, with a focus on instructor/trainer training, apprenticeship supervision training and training in how to recognize and assess prior learning. Discussions are continuing with employers to encourage recognition of skill development as a business growth strategy and including NTVQF qualifications as part of human resources strategies.

To specifically address productivity, identified by industry as the most significant barrier to improving competitiveness, the KAIZEN high productivity development programme is currently being piloted in 10 companies through a partnership with the National Productivity Organisation, Tatka Food & Feed Industries Ltd is the final of the ten companies selected to sign a Memorandum of Understanding to pilot the programme and look forward to the benefits of increased productivity.[13]

Source: http://www.ilo.org/dhaka/Whatwedo/Projects/WCMS_106485/lang--en/index.htm

[13] For further description of the TVET Reform Project in Bangladesh, see Annex 8.

Box 4: Public-private partnerships to increase TVET funding and training in India

Since 2010, the National Skills Development Cooperation (NSDC) has signed a number of agreements and formed joint ventures with education companies in India. Many of these are cross-sectoral in nature. Infrastructure Leasing and Financial Services (IL&FS), for example, has set up a joint venture with the NSDC to establish 100 skill development centres covering leather, textiles and the general engineering sectors. The programme aims to deliver 1.9 million skilled workers in the next five to seven years. It offers vocational training through community colleges, placement-linked programmes, 'industry-driven' training modules and interactive training sessions. The bulk of the NSDC's agreements have focused in boosting the number of training places available, and have tended to focus less on capacity building measures such as providing CPD to trainers or addressing terms of employment. Training of trainers is currently a major priority for the NSDC (and other key stakeholders), and an area in which they are actively seeking private sector partners, but the connection to trainers' working conditions is not often made in public policy discourses. As of February 2012, the NSDC had approved 52 partnership proposals with a total financial commitment of 12.14 billion rupees ($215.5 million). Just under 2 billion rupees of this had been disbursed, with the number of persons trained standing at just over 100,000.

In May 2011, the NSDC signed a Memorandum of Understanding with the Central Bank of India to promote and finance vocational education and training. Under the agreement, the company will provide finance for young people training with partner institutions; TeamLease was the first programme to be financed, with their training in IT and banking/financial services.

Source: Manipal City and Guilds, 2012: 94.

3.3 Key element three: meaningful participation at the policy level

Fundamental TVET reform, particularly in transition and developing countries, will only be successful and sustainable if TVET policy development, formulation and implementation are firmly based on clear ownership and fit within existing TVET institutions. The concept applies as well to teacher training. In particular, reforms must draw on the experience of teachers and trainers in propelling change towards new levels of learning experiences and quality outcomes that take account of the evolving nature of learning noted above, through creative teacher training and innovations at institutional and systemic levels. There has been a growing awareness that teachers and trainers need to be included among the key stakeholders at the policy level for purposes of deciding on and implementing reforms and innovation, not the least teacher preparation and professional development. This comes from a better understanding of why so many education reforms across the world have often failed in the past. The exclusion of teachers and trainers in TVET as stakeholders from the reform process has repeatedly led to a failure of national reform policies to trigger real changes in TVET (Grootings and Nielsen, 2005: 12; OECD–CERI, 2009a: 75–76), mirroring findings made for education and teaching at all levels (ILO/UNESCO, 2007: 2010).

International standards on teacher preparation that also cover TVET staff at either secondary or tertiary level in fact call for the input of future and current teachers and teachers' organizations in teacher preparation programmes and institutional decision-making, both initial and further education (ILO/UNESCO, 1966; UNESCO, 1997). TVET staff are increasingly recognized as key agents for successful TVET reforms in their professional roles/capacities as organizers of learning (Grollman and Rauner, 2007). However, fully engaging teachers and trainers in this process involves much more than only letting them know what is expected of them, and/or simply training them to implement new policies. Effective participation in designing new teaching and learning programmes goes to the core concept of involving teachers as professionals. They often know what will work

best in meeting the particular skills needs for student populations in relation to occupational profiles in their own TVET schools, classroom environments, and the vital networks with employers and unions, parents and local school authorities/municipalities.

TVET policy-makers are advised to keep in mind that a better understanding of the roles of teachers and trainers in this all important transformation process will likely have positive impacts on implementation of reform policies and for the process of TVET policy development and formulation. If such concepts are applied, TVET policy-makers will realize that they have "natural allies" in the teaching and training community. According to the OECD, there is a clear incoherence in systems of TVET (including teacher training), which emphasize greater accountability and increased assessment of system outcomes yet lack research evidence and stronger feedback in the evaluation processes from key actors, notably teachers and students. Citing previous research, the OECD report (OECD-CERI, 2009a) noted that teaching staff are less resistant to change than is often assumed. Indeed, a widespread 'resistance to change' view, often held as a self-evident truth in innovation literature, is not supported by evidence. This is because innovation literature is produced mostly by the designers of innovation and excludes the perspective of the teachers who implement it. They may as well resist reforms out of a sense of positive commitment to the values and mission of the TVET institution, notably their own professional development and the learning outcomes of students, particularly where reforms are imposed from the top with little or no consultation (Vähäsantanen and Eteläpelto, 2009: 30). Since new ideas are the lifeblood of innovation, the OECD report calls for more space for idea generation and design of new approaches that draw on the insights of front line actors, such as teachers, trainers, learners, and business leaders. In particular, mechanisms need to be established between policy-makers, researchers and teachers and trainers to encourage innovation in institutions and programmes, notably those engaged in initial and continuous TVET teacher training (OECD–CERI, 2009a: 13, 54, 66, 95–96, 257).

Box 5: Promoting meaningful participation of teachers and trainers in TVET design and reform in the Western Balkans

Many EuropeAid projects in the Western Balkans, such as in Serbia, Macedonia, Bosnia/Herzegovina, Croatia, provide supplemental training courses for TVET teachers and trainers to become Change Agent Teachers (CATs) in their respective TVET schools. Participants learn how to moderate teacher training processes, work with local employers in specific sectors, carry out tracer studies for their own graduates and understand how to use local, regional and national labour market information to better understand skills demand for future TVET programmes.

Source: http://www.vetserbia.edu.rs/Zbirka%20dok%202/English/03/3/Lessons%20learnt.pdf

Additionally, the roles of teachers and trainers are in a process of change directly influenced by new approaches to active learning in many countries. The responsibility is shifting from the teacher to the learner and teachers and trainers become more facilitators of learning processes and less transmitters of expert knowledge. In focusing on teachers and teaching and learning processes, a discussion on how to organize policy-learning processes in the framework of TVET is opened up. Looking at teachers and trainers as key stakeholders will develop the capacity to support vocational training policies and to build discussion platforms on reform initiatives, embedded in TVET school- and work-based learning and enabling ownership and sustainability of vocational training reform (Grootings and Nielsen, 2005).

4. Pillar two: Responsiveness and inclusion

4.1 Key element four: entrepreneurship

Presently the majority of the world's young people live in developing economies, where formal jobs are scarce and even informal jobs may be hard to find. High levels of unemployment (particularly among young people), economic recession, and fluctuations in international trade in many countries are several factors that have prompted governments to pay increased attention to the potential role of the private sector and entrepreneurs as a means of job creation, and to the importance of entrepreneurial education and support as strategies for promoting economic prosperity and decent work over the long term (ILO, 2011e).

Micro, SMEs are the generators of new jobs and the driving force behind such job creation is entrepreneurship and innovation. Entrepreneurship strengthens economic growth, speeds up modernization and can play a crucial role in spurring sustainable development and generating decent jobs. Thus, entrepreneurship education has become an increasingly important area of skills development.

According to the ILO, entrepreneurship education "seeks to provide individuals with the knowledge, values, attitudes, skills and competencies necessary for the development of positive attitudes towards entrepreneurship and business and through this, help them increase their employability. In the long run, it seeks to contribute to the overall development of a positive culture to sustainable enterprises within societies" (ILO, 2011e: 20). Training topics included in entrepreneurship education may include market selection, business plan development, management and decision-making skills, risk-taking, negotiation, access to credit, business set-up, and money management among others.

TVET teachers and trainers from diverse fields should be equipped with the skills needed to teach entrepreneurship utilizing interactive and participatory learning methodologies. Integrating such training into the curriculum raises awareness among students of enterprise and self-employment as a career option and develops key skills needed as an entrepreneur.

The ILO has been actively involved in promoting and supporting entrepreneurship education and training through programmes such as Start and Improve Your Business (SIYB), a management-training programme comprised of inter-related training packages and supporting materials for small-scale entrepreneurs wanting to start and grow their businesses; the Women's Entrepreneurship Development (WED) programme, a set of tools to promote women's entrepreneurship development based on local needs and circumstances; the Training for Rural Economic Empowerment (TREE) programme, a resource guide for training programmes that assists those working in largely informal economies to build the skills and abilities needed to generate additional income; and the Know About Business (KAB) entrepreneurship education programme which promotes entrepreneurship awareness in vocational and secondary education settings (see Box 6). The work of the ILO in entrepreneurship training and education focuses on providing the skills necessary for women and men to achieve and retain more and better work opportunities.

Box 6: Enhancing entrepreneurial skills through the Know About Business (KAB) programme

Know About Business (KAB) is an entrepreneurship education programme designed and developed by the ILO in partnership with the ILO's International Training Centre.The KAB programme is mainly directed towards teachers in public and private vocational and technical training institutions and general secondary education. Teachers and their education institutions are the direct beneficiaries of the programme while the ultimate target group is the young women and men enrolled in schools and training institutions.

Through its 9 modules and participatory teaching methods, the KAB programme aims to transfer enterprising qualities such as *initiative, innovation, creativity* and *risk taking* to youth, raise their awareness about the opportunities and challenges of entrepreneurship and self-employment, and increase their understanding of the role they play in shaping their future by being entrepreneurial in their lives and careers.

Since its early beginnings in Kenya in the early 1990s, the programme has been further developed, tested and adapted into 20 languages and used in close to 50 countries around the world.

Countries vary with regards to the level of integration of the KAB programme into their national education systems. 16 countries for example have decided to integrate KAB-based entrepreneurship education into their national vocational education curricula.

Through the programme and local partners, it is estimated that over 12,000 teachers from more than 4,500 institutions have been trained in the KAB materials and teaching methods, reaching over half a million students.

Source: ILO, 2011e.

4.2 Key element five: gender inclusive

Women represent the single largest untapped pool of human potential. Women often must balance commitments to work, family and community. Even when they enter the labour market, in many cases working full-time or holding multiple jobs, women are still seen as carrying the primary responsibility for care of the family and involvement in the community. As women seek to juggle all three, the extent of these implicit responsibilities can create significant strain and pressure. This complex division of responsibilities to the workplace, to the family and to the community means there is often little time or energy left over for undertaking additional commitments such as personal development, education or training initiatives.[14] Though progress has been made in recent decades, globally women and girls continue to encounter barriers that inhibit them from full participation and development.

The world of TVET teacher training is no exception, as shown in Figures 4 and 5. Historically, women teachers and trainers have been a minority in TVET in both developed and developing countries, due in large part to powerful economic, cultural and social influences. Even within TVET, occupational segregation has channelled women into a limited number of careers which are traditionally "feminine" (e.g. secretarial, office work, domestic science) (ILO, 2007: 3).

[14] For further discussion of barriers to full female participation in and access to TVET, see Annex 5.

Figure 4 displays the proportion of female teachers and trainers in formal national TVET systems, inclusive of both public and private institutions. The majority of countries for which there is recent data (53 countries, or 62 per cent) count a lower proportion of female than male teachers in their formal TVET systems (i.e. less than 50 per cent of all teachers are female). The minority of countries (33 countries, or 38 per cent) which have a larger proportion of female teachers than male tend to be nations in Central Asia, Eastern Europe or Latin America and are generally middle- and upper-income, though Kenya constitutes a notable low-income exception. Figure 4 compares the proportion of female students with that of female teachers in formal public and private TVET institutions in 90 countries. Clearly, most nations for which there is recent data have fewer female students and teachers than males in formal TVET institutions: female student and teachers are in the minority in 75 and 54 countries, respectively. Moreover, over half (46 countries, or 51 per cent) of the sampled countries have low proportions of females among both students and teachers in TVET systems. However, it should also be noted that most countries in Figure 4 (i.e. 53 countries, or 59 per cent), both low- and high-income, count a higher proportion of female TVET teachers than female pupils, which could be seen as a positive evolution in increasing representation of females as teachers and trainers and encouraging participation.[15]

Presently, the situation is evolving in a positive direction, with a majority of countries in all regions reporting higher recruitment growth among women teachers and trainers than for the totals (ILO, 2010a). Such trends are likely to engender a virtuous cycle of expanding the pool of women TVET candidates, leading to greater efforts to break down employment and career barriers. Particularly in countries with low percentages of female teachers and trainers in TVET, the introduction of a quota system may be a useful strategy to increase participation levels. This approach has proven useful in a wide range of countries for increasing the participation of women in government and other sectors.[16]

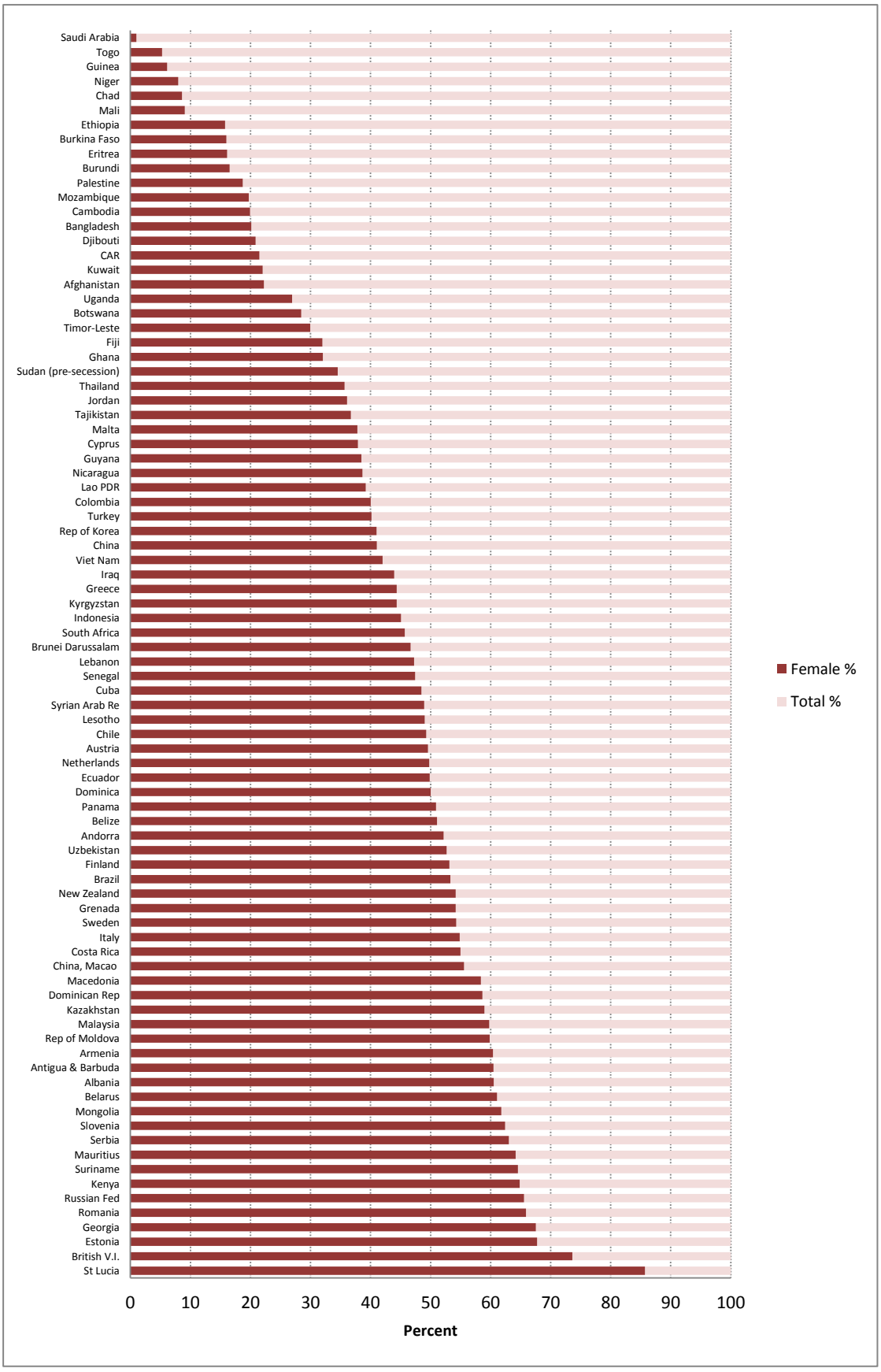
Addressing barriers to TVET participation

Bearing in mind persistent gender pay gaps in many professions (ILO, 2010f), the available data is not conclusive across countries in terms of variations in salaries between male and female teachers. Some countries show a persistent pattern of pay gaps between men and women TVET teachers over time (Jordan, Republic of Korea, Poland, Slovakia), while others show the opposite, with women's remuneration increasing more (Egypt, Finland) or falling less (Costa Rica) than male salaries (ILO, 2009e). A review of the United Kingdom (LLUK, 2009: 58, 66) revealed that in further education colleges, women managers were paid on average 7-15 per cent less than their male counterparts, though the gap has decreased slightly in recent years. The question of gender equality in remuneration is important not only for reasons of equity; parity in remuneration is a powerful incentive for greater recruitment, retention and full use of skilled women staff in a sector that is highly competitive for such talent. TVET employers and managers are well advised to analyze and implement measures that address any gaps as part of forward-looking human resource management.

[15] Time series data are needed to verify if indeed higher ratios of female teachers in TVET encourages participation among female pupils

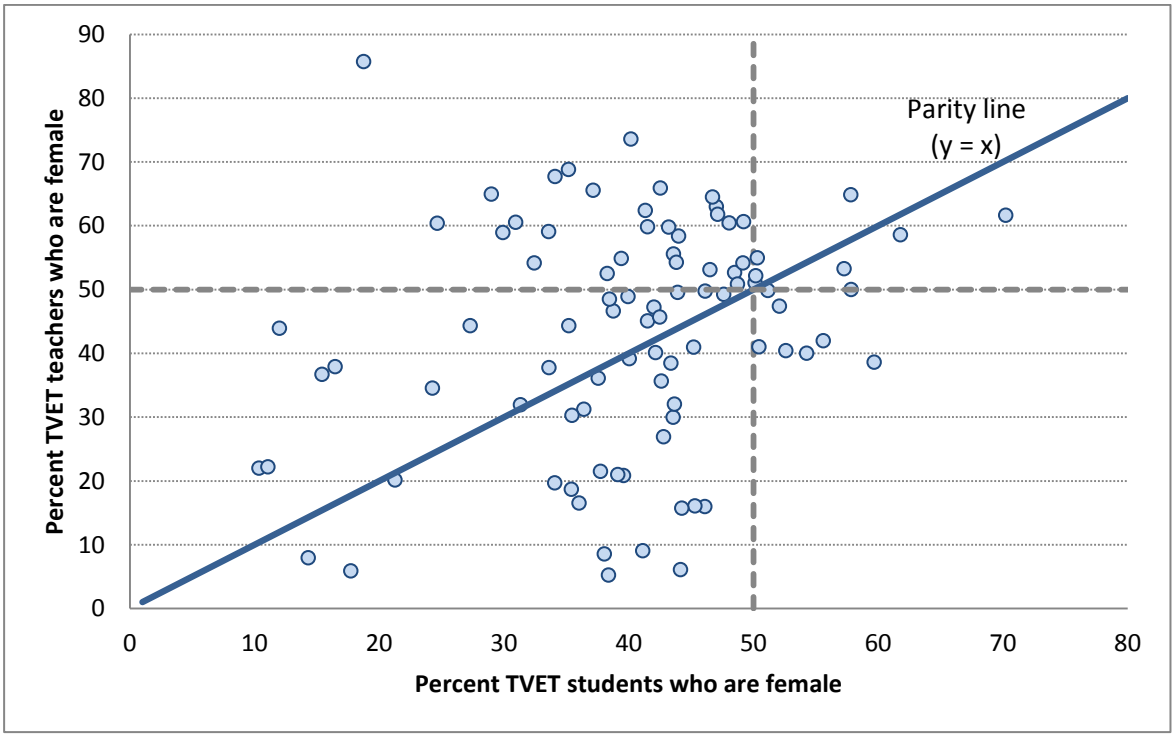
[16] Approximately half of the countries of the world today use some type of electoral quota for their parliament. For more information on quota systems found in different countries, visit www.quotaproject.org

Figure 4: Percentage of female teachers in national TVET systems, public and private, 86 countries



Source: Authors' calculations based on UNESCO Institute for Statistics databases.
Note: Data are from 2011 or most recent available (2007 or later). Formal public and private institutions are included.

Figure 5: Percentage of female students and female teachers in national TVET systems, 90 countries



Source: Authors' calculations based on UNESCO Institute for Statistics databases.
Note: Data are from 2011 or most recent available (2007 or later). Formal public and private institutions are included. Parity line indicates point where percentage of female students equals the percentage of female teachers.

Training programme design and infrastructure

One of the foremost considerations for removing barriers to training for both female trainers and students is appropriate programme design and infrastructure. Carefully planning when and where classes take place is crucial to increasing accessibility. Restrictions on mobility due to gender norms, household responsibilities or travel requirements should be considered when determining the training location (UNESCO, 2004; ILO, 2009b). Training centres should strive to be centrally located and avoid long and potentially costly travel that interferes with other commitments. The safety of women participants while traveling to training courses is also paramount. Arranging transportation for participants or facilitating travel in groups may help avoid risks (Solotaroff, Hashimi, and Olesen, 2009). Consideration should also be given on how to best accommodate target participants in the scheduling of training courses (ILO, 2009b).[17]

Ensuring adequate training facilities that address potential health and safety issues for women is another central component to inclusive education. Women face different concerns and risks in a training environment than men; this is particularly true for women who are pregnant or nursing (UNESCO, 2004).[18] Furthermore, women with children often face a barrier to accessing training because of caregiving responsibilities. The provision of

[17] Experience in rural training courses found that women prefer attending training in the afternoon after morning household responsibilities are completed and that training should not coincide with local market days or the start of the school term.

[18] For a list of specific health and safety issues for women including reproductive health and ways to address them, refer to the training modules developed by the ILO-ITC entitled *Your Health and Safety at Work: A Collection of Modules* (1996), available at http://actrav.itcilo.org/actrav-english/telearn/osh/wc/wca.htm

childcare (or other alternative solutions) can significantly increase access to training for women (ILO, 2009b).

Gender-segregated training programmes have existed for many years and still do in many countries. While it is not within the scope of this paper to evaluate the advantages and disadvantages of gender-segregated training facilities, it is important to note that differences do exist. Research suggests that in countries with an underrepresentation of women in TVET programmes, gender-segregated classes could make a positive difference in the levels of women's participation (ILO, 2009c). Conversely, anecdotal evidence from Pakistan raises concerns about the quality differential of gender-segregated training facilities. Despite higher cumulative enrolments of females than males, males were consistently given better access to classrooms, laboratory/workshop and computing facilities (Azhar, 2010).[19]

Another concern is the perpetuation of occupational segregation by separate training facilities only offering training courses in specific vocations deemed 'appropriate' for that gender. Recognizing that in certain contexts separate training for women is adopted as a targeted recruitment strategy, due diligence must be given to the provision of adequate facilities, resources, and qualified teaching staff. Within the learning environment, teachers and trainers should refrain from making assumptions or implications about what female or male students can and cannot do. Participation at all levels of training should be gender-inclusive. Particular attention should be given to the curricula and training resources to ensure that they do not perpetuate gender stereotyping through the images and examples presented.

Box 7: Facilitating women's access to non-traditional occupations in Lebanon

An ILO project on "Skills Development, Employment Services, and Local Economic Recovery for the Construction Sector in South Lebanon" encourages female participants to participate in skills development in non-traditional occupations. By revisiting traditional notions regarding the sectors in which women are or are not allowed to work, the project opens the door to greater economic empowerment and employment opportunities for young people at risk of long-term unemployment by providing job skills training for trades in the building and construction industries. One of the participants turned out to be the first female electrician in Lebanon.

Source: http://www.youtube.com/watch?v=dJayjR1kkzo

Much work is needed to reverse the trends of vertical and horizontal segregation and broaden women's occupational choices.[20] Teachers and trainers in TVET can be influential in this endeavour by supporting and empowering women to be trained in new and higher skilled occupations and non-traditional sectors. Career guidance and employment services should offer information about a broad range of occupational opportunities. More female TVET teachers and trainers should be recruited and trained in emerging and non-traditional occupations to offer positive modelling and encourage female students interested in these areas. In addition to encouragement within training environments, it is also important to consider social acceptance of women in non-traditional sectors and higher skilled

[19] Computing machines per institute for females are four compared with 16 for males and availability of laboratory/workshop per institute is one for females and five for males. The aggregated student-to-teacher ratio for females and males was 35:1 and 12:1, respectively with the average number of teachers per institute being six for females and 15 for males.

[20] Vertical segregation refers to the lower proportion of women in managerial positions. Horizontal segregation refers to the lack of choice of women have in career categories.

occupations. As with the inclusion of women in TVET training programmes, prejudices against the inclusion of women in these areas may be best addressed through awareness campaigns and other targeted publicity that highlights the social and economic benefits.

Learning environment

Within the learning environment, various factors influence participation levels and gender is one to which trainers need to be particularly attentive. Gender-awareness training for trainers should highlight potential inequalities in participation and strategies to address them. It is widely known that women in certain parts of this world face daily challenges due to gender norms in society. These norms are rooted in culture, religion, and family structure and affect the way women are able to participate in their economy and public sphere (Markle, 2013). Therefore, balancing dominant voices within the classroom and allowing space for all learners to engage and provide feedback often requires skilled intervention on the part of the instructor. Rather than having more female teachers to address this issue, ensuring proper gender sensitive training for both male and female teachers would be more appropriate. This approach will motivate/encourage women to express themselves and build self-confidence.

Box 8: Increasing female student participation in Thailand

Khon Kaen Agricultural and Technology College is located in rural northeast Thailand. Total enrolment at the college during 2002 was 1,117 students. 407 students of these students were female, and this number is growing. Interestingly, most female students enrolled at the college are studying agriculture and technology programmes, although there were also significant enrolments in business and computing TVET programmes.

The college has created an environment which welcomes young women, through provision of safe living arrangements and appropriate supervision by female teachers. Given that government-funded accommodation and board at the college is free, this overcomes a major barrier to access facing many farming families.

Increasing female enrolment has been encouraged by the college. The college works with local secondary schools providing guidance and counselling for prospective students and their parents, who are invited to visit the college and see for themselves how the institution operates. Senior students at the college assist in this process in a role model capacity, providing information and relating positive experiences to prospective students and their parents. In addition, village leaders are involved in student recruitment arrangements, disseminating information about opportunities for study at the college, as well as participating in the selection process.

Source: Siripan, 2003.

Skills development

Ensuring that curriculum and training resources meet the needs of female students requires more than eliminating gender stereotypes in text and imagery. In some region, women are often not usually given the same opportunities as men to develop critical skills needed for successful training and labour market entry. Relevant skill sets to consider include the following: literacy/numeracy, confidence-building/self-esteem, communication and negotiation, and entrepreneurship/business information. Curriculum should be adapted, or additional resources employed, to address specific literacy and numeracy skills deficits that arise due to educational exclusion. Particularly where females have a lower social status, confidence-building and empowerment may comprise an important training

component. Trainers can integrate this aspect to enable students, both male and female, to trust their own judgement and rely on the strengths and abilities they possess (UNESCO, 2008).

Support beyond the classroom

Support for women in training must extend beyond the classroom. This is particularly true in cultures with a highly patriarchal structure. Time and energy invested in training will yield few economic benefits if a woman's family will not allow her to engage in wage labour or if the community is not willing to frequent a new enterprise owned by a woman or if business owners (majority male) do not want to hire a woman (ILO, 2009d). A report from Afghanistan cites that women are widely excluded from the National Skills Development Programme since apprenticeships are usually offered under the supervision of a male master craftsperson and this would be culturally unacceptable for the families of most young women. This is particularly true for trades within high growth sectors that lead to better paying jobs such as carpentry, metalwork, plumbing and electronic repair (Solotaroff, Hashimi and Olesen, 2009).

Trainers need to be aware of these contextual factors that may affect not only the performance of female learners while enrolled in training, but also their employment prospects following training. Research in countries with recent growth in the participation of women in TVET (i.e. Yemen and Afghanistan) advocate for awareness campaigns, focusing on community and household benefits, to counter negative perceptions associated with women workers. Support from other stakeholders is crucial in raising awareness and participation of women in TVET. By engaging employers' organizations, workers' organizations, relevant ministries, education partners, and employment services, concerted efforts can be undertaken to remove societal barriers to female participation. One such targeted ILO campaign in Yemen has produced positive results (Box 9).

Box 9: Media campaign for changing perceptions and attitudes in Yemen

The Media Campaign took place between March and June 2010, in coordination with MoTEVT. The ILO produced six TV spots and a 30 minute documentary film. The TV spots were aired on Yemeni TV seven times in June 2010 and are continuing to be aired. The documentary film will shortly be used in school campaigns across Yemen, and aims to sensitize parents and the wider society on the opportunities and benefits of TVET, and its relevance for young men and women alike.

The objectives of the media campaign include:

- to promote and re-brand technical education and vocational training as a sector suitable for women and restore images that break down the association of TVET with manual labour and male dominated fields;
- to promote new non-traditional specializations of MoTEVT (graphic design, computer studies, interior design, architecture, etc.);
- to reach out to parents and encourage them to allow their daughters to enter this field;
- to promote entrepreneurship in TVET and highlight its importance for young women.

Source: http://www.ilo.org/wcmsp5/groups/public/---arabstates/---ro-beirut/documents/publication/wcms_195154.pdf

4.3 Key element six: flexible, student-centred training methods

The ILO Recommendation concerning Human Resource Development, No. 195 calls for member States to "promote access to education, training and lifelong learning for people with nationally identified special needs" (ILO, 2004: 6).. Beyond broadening access and ensuring the inclusion of persons with special needs as learners in TVET, it is also necessary to expand inclusion to the teaching profession in TVET and consider whether persons from these groups are themselves able to become teachers and trainers. Active steps are needed to ensure the participation of all persons at all levels, including TVET design, instruction, management and evaluation. Only through such comprehensive inclusion can programmes respond adequately to the needs of such groups.

Awareness training

Within a TVET programme, teachers and trainers play a critical role in creating an inclusive classroom environment. Awareness training on successful approaches to integrating students from minority groups should be an integral component for all TVET and facility staff. As noted above, inclusion of persons from minority groups where possible allows for positive modelling and can be a source of encouragement to students with such groups in training settings. The following guidelines are applicable to persons with disabilities both as trainers and students.

Instructors should focus on their students' abilities, not on their disadvantages, disabilities or 'limitations'. Indeed, a good starting point is to ask students to identify specific skills and talents they possess. Persons from vulnerable groups are often exceptionally resourceful and have often developed alternative ways to accomplish the same task as their peers due to the necessity of circumventing barriers they encounter in their everyday lives. Therefore they should be engaged as active participants in the learning process, providing guidance on what works well and what does not.

Training delivery should be flexible and student-centred. This method of delivery is beneficial for all students, but particularly crucial for ensuring inclusion of students from vulnerable groups. Adaptable activities and training techniques should be incorporated into the curricula training sessions. Presentation of materials needs to be accessible to all students with learner input sought to mitigate any problems in training delivery.

Awareness training should emphasize the integration and participation of persons from vulnerable groups and dispel stereotypes about behaviour and the types of work such persons can perform. Some students may need additional encouragement to share their ideas in group conversations and participate in group activities. Trainers should be attentive to the interaction between persons from vulnerable groups and those without, encouraging collaboration where necessary. Working together in the classroom highlights common learning goals and objectives while fostering a respect for diversity and multiple ways to accomplish a task. Close attention should be paid to language used by all staff and trainers as it reflects one's attitudes and assumptions and can either contribute to, or undermine, the creation of an inclusive learning environment. Language also influences the way other people think and act.

Training curricula is not 'one size fits all.' This is particularly true when working with vulnerable groups. Trainers need to be flexible and responsive, adapting curriculum as needed to address the needs of learners. Training should therefore be culturally and linguistically relevant according to the context in which it is being delivered. The focus should be not only on skills acquisition, but also professional integration, particularly for vulnerable groups that may experience greater challenges in entering the labour market.

The following section looks specifically at promoting the inclusion of the following specific groups: persons with disabilities, rural populations, persons with limited literacy, and crisis-affected populations.

Persons with disabilities

For many years, persons with disabilities were not integrated into mainstream TVET but rather offered separate vocational programmes, many of which were underfunded and of inferior quality, thereby reinforcing a system of exclusion and isolation. As awareness about disabilities increased, a shift took place: the 'medical model', which focuses on the individual's 'impairment' and their need to adapt to fit into society, was replaced by the 'social model' which focuses on rights, adapting disabling environments and providing reasonable accommodations and supports so individuals can fully participate in society. In 1983, the ILO adopted the Vocational Rehabilitation and Employment (Disabled Persons) Convention, No. 159 and its accompanying Recommendation, No. 168 which called for "equal opportunity between disabled workers and workers generally." Additionally, it called for "ensuring the training and availability of …qualified staff responsible for the vocational guidance, vocational training, placement and employment of disabled persons" (ILO, 1983). In 2006, the UN adopted the Convention on the Rights of Persons with Disabilities, requiring States Parties to ensure equal access for persons with disabilities to technical and vocational programmes and placement services, as well as reasonable accommodations in training and employment (UN, 2006).

In recent decades, progress has been made towards opening access for persons with disabilities to mainstream TVET programmes, though much remains to be done on this front. Inclusive training ensures that persons with disabilities are able to fully participate in the activities of the programme. In certain cases, reasonable accommodation, which refers to the necessary and appropriate adjustments and modifications to be undertaken in a work or training environment that do not impose a disproportionate or undue burden, is needed to enable students' participation. Such accommodation could range from adjusting heights of tables or training devices for wheelchair uses, to using large print materials for people with low vision (see Annex 6). Adequate resources should be made available in planning budgets for the cost of reasonable accommodations.

The physical accessibility of training and training centres is also an essential part of achieving 'inclusive training' for persons with disabilities. To the extent possible, training centres, classrooms and transportation should be accessible to persons with physical disabilities; the physical training environment, in other words, should in no way hamper their ability to participate in teacher training. This is a pervasive challenge in contexts where infrastructure is out of date or in remote areas which are difficult to access. As such, persons with disabilities should be included when designing teacher training programmes and training centres in order to provide guidance on the requirements for physical accessibility.

Teachers and trainers should also be aware of other staff and resources available for persons with disabilities and make this information available to all learners. Where possible, having trained staff available who can answer questions and address concerns related to disabilities can provide useful support to both teachers and students. Beyond training, additional assistance may be required for persons with disabilities to integrate into the labour market. Engaging with and enlisting the support of community specialists from organizations dedicated to persons with disabilities, public employment services, and other agencies can facilitate this transition. While the teacher or trainer will likely remain the primary contact, inclusion of persons with disabilities requires the collaboration of many actors. Such an approach will better facilitate service integration and provide persons with disabilities with the necessary support to succeed in training and on the job.

The ILO estimates that exclusion of persons with disabilities from the world of work results in losses of up to seven per cent of national gross domestic product (Buckup, 2009). Inclusive training calls for the participation of persons with disabilities not only as students and learners, but also as teachers and trainers and in management positions in training programmes. Such inclusion would allow for persons with disabilities to have an active voice in programme design, implementation, and evaluation. Ensuring meaningful engagement and regular feedback from persons with disabilities in all levels of programming could provide valuable insight on how to break down barriers to training.

Another important reason to include persons with disabilities in leadership positions is positive modelling. Students with disabilities would be more apt to believe in their own abilities and feel encouraged to succeed if they had role models who confirmed that having a disability would not limit one's potential. Additionally, instructors who themselves have a disability would better understand the challenges that students with disabilities face and would be well-versed in thinking outside the box to find creative solutions and alternative methods to reach a goal. Their experiences could foster great levels of patience and understanding, qualities in high demand within the teaching profession. Box 10 cites examples of persons with disabilities as trainers in Cambodia.

Box 10: Examples of persons with disabilities as teachers and trainers in Cambodia

Mrs. Chut Samon is 30 years old, married with one child and has been disabled since her childhood as a result of polio that affected her mobility. For seven years she has been successfully running her tailoring business, which she originally started with start-up assistance from the ILO. Now she has trained more than 10 people, both disabled and nondisabled, to become tailors like her. Being a peer trainer has changed Samon's life in many ways. She is now a better tailor, because she has learned more from training others. Her business is also more successful. She has more customers ordering her clothes and can earn extra money from charging her trainees a small training fee. With the profit from her business, she has already expanded it and invested in a new house for her family. Her husband, neighbours and other members of the community support and respect her for her skills and drive to help others.

Mrs. Um Sophorn, 39 years old, has had difficulty walking since she had a landmine accident at the age of 20. Being disabled has not stood in her way of becoming a successful chicken raiser. She has expanded her business to include buffalo and pig-raising and bamboo roof making and has trained others. In less than two years' time, Sophorn has already trained 16 people who all have different types of disabilities. Even though Sophorn is now busy with her other businesses and setting up a new savings group in her village, she is committed to continue training others. "I like taking a few days off every month to do training and to meet other people. It takes two days to train someone to raise chickens. My husband helps me with the transport if I need to go to the trainee's house. I am happy that other people appreciate that I try to help others to be successful in their lives".

Source: ILO, 2008d.

Rural populations

When providing training in rural areas, one inherent challenge is the limited supply of qualified instructors that are willing or able to serve remote areas. Specific concerns for trainers when considering work in rural areas may include lower social status than urban-based colleagues, distance from family and friends, increased isolation, limited communication and transportation, lack of incentives, fewer amenities, lack of educational or professional development opportunities, and difficulty adjusting to rural lifestyles among others (Gasperini, 2009). Dissatisfaction at the programme level leads to higher trainer turnover, resulting in wasted expenditures of time and energy; therefore, considering

strategic approaches to address such concerns at the outset will help to increase commitment of trainers and sustainability of training programmes.

One useful strategy for teacher recruitment in rural areas is to conduct teacher trainings with members of the local population, thereby utilizing the 'grow your own teachers' method. Teachers who are from the same area where they work are more likely to stay there. Other distinct advantages to this approach are that it develops the capacity and knowledge-base of the local community and produces trainers that are familiar with the local context and more likely to reinvest locally. This community-based training approach is a central component of the ILO's TREE programme.

For training programmes, it is important to minimize travel of long distances for students in rural areas, as this can become a strong disincentive and negatively affect attendance rates. Not only does it become an obstacle because of the time involved, but it can also present a challenge due to travel costs, poor road conditions and potential safety concerns, particularly for female students. Flexible approaches are needed to address this challenge. Training programmes may recruit extension staff to travel to various rural sites. Alternatively, more countries are utilizing mobile training units to bring the training materials to rural communities rather than vice versa. Finally, it is important to carefully assess the training schedule and duration to fit with household and social responsibilities in rural communities. This is particularly true for women with regard to household duties or agricultural workers during planting and harvesting seasons.[21]

Persons with limited literacy

Inclusive training for persons with limited literacy is valuable to enable them to gain skills and improve their opportunities for decent work. Given the costs and entry requirements associated with formal training institutions, informal training programmes and apprenticeships are not easily accessed by persons with limited literacy. Bearing this in mind, it is important for teachers and trainers in such programmes to consider flexible approaches through which to engage persons with limited literacy. Exclusion from participation in training due to literacy requirements not only inhibits an individual's personal development, but also has lifelong repercussions vis-à-vis labour market outcomes.

In recruitment and outreach, it is beneficial to use various non-text methods of programme promotion. These could include radio and television announcements, community events and word of mouth. Promotional materials, registration forms, and other course materials should be written using simple, easily understandable language. At the beginning of the course, the verbal review of all expectations, attendance policies and programme rules will help ensure that all students understand his or her responsibilities. Instructional methods should be varied, particularly integrating techniques that do not rely solely on reading and writing. Teachers and trainers should also be aware of additional resources and services available for persons with limited literacy seeking extra support.

Research by the World Bank suggests that increases in literacy and numeracy skills can have a positive impact on livelihood outcomes. The study reviewed training programmes that incorporated both literacy and vocational skills in parts of Africa, Europe, and North America. It found that newly-developed skills produced an 'empowerment effect' which led to greater confidence and initiative towards economic improvement. It also proved advantageous in market transactions (particularly numeracy skills) in the informal economy and in developing more productive agricultural or livestock practices. In evaluating combined literacy/livelihoods training programmes, it was found that integrating

[21] See Annex 7 for specific examples of training programmes in rural areas and for crisis-affected populations.

literacy skills into vocational programmes was more successful than integrating vocational skills into literacy programmes or running two programmes in parallel (Oxenham et al., 2002). Additionally, findings suggest that having separate specialized teachers to provide literacy and vocational instruction is more successful than having a single instructor teach both skills sets.[22] Table 1 provides guidance for flexible accommodations and interventions for four distinct groups.

Though limited documentation exists, there are cases of trainers with limited literacy skills (Walther and Filipiak, 2008; ILO, 2009b). These tend to be concentrated in the informal economy where there are usually no certifications and standards in place for trainers. Though these cases are the exception to the rule, it is important to recognize their existence within TVET and the potential impact on skills transfer. In efforts to upgrade training and skills development in the informal economy, particular attention should be given to this on-going need within the sector. In surveys conducted in Malawi and Tanzania, master craftspersons in both countries expressed interest in upgrading their skills in literacy and numeracy (Mulkeen and Chen, 2008; Nübler et al., 2009).

Crisis-affected populations

Short-term training programmes with clear objectives are needed when targeting crisis-affected populations. However, it is important to bear in mind that participants in a training programme, particularly refugees or Internally Displaced People (IDP), may move several times before eventually settling down. Ensuring transferability of skills should be a key consideration. While training should focus on specific technical and vocational skills needed for income generation, the development of basic business and entrepreneurial skills is valuable to enhancing trainees' long-term economic prospects. Given the prolonged disruption to education caused by crisis and displacement, incorporation of literacy and numeracy skills in training is a highly relevant component as well.

Trainers also need to be aware of relevant social and cultural dynamics when working with crisis-affected populations as these can greatly impact interactions and levels of comfort within a training environment. When possible, recruiting teachers and trainers from the target population is preferable. Social fallout from armed conflict can be significant and may lead to higher levels of distrust, segregation, and hostility; therefore, inclusive dialogue and participation are essential. Where former combatants are included in training, teachers may benefit from preparatory training on how to effectively integrate them and address their specific needs.[23] Additionally it is important to recognize that the educational needs of IDP may be more pronounced as a result of the host state's unwillingness or inability to provide education to these populations. Given that the period of displacement for most IDP now lasts over a decade, the need for vocational training and skills development during this period is critical for long-term development (Rhoades, 2011).

[22] While this was the general trend, there were exceptions noted such as the Experimental World Literacy Project led by UNESCO which suggested livelihoods instructors could be adequately equipped to teach literacy skills given sufficient training.

[23] The ILO's *Socio-Economic Reintegration of Ex-Combatants Guidelines* (2010b) provides useful information and tools for trainers working with crisis-affected population.

Table 1: Flexible approaches in TVET to reach marginalized groups

Group	Definition	Challenges faced in TVET participation	Flexible accommodations/ interventions
Persons with disabilities	Persons who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others	Limited access to mainstream TVET programmes Lack of voice in programme or curricula design Inaccessibility of facilities Lack of representation in leadership and managerial positions	Mainstream persons with disabilities into general TVET training programmes Ensure physical access to facilities and accommodation Partner trainers with disabilities with mentor teachers or trainers Engage persons with disabilities in programme and curricula design
Rural populations	No standard definition at international level; most often refers to persons who live in a locality with fewer than 2,000 inhabitants and sparsely populated areas	Lower provision of general education and training institutions in rural areas TVET institutions not as accessible to rural populations Unequal distribution of qualified teachers and resources Higher incidence of poverty and illiteracy Fewer labour market opportunities	Recruit and train community-based teachers (ILO TREE Programme) Incentives for teachers (e.g. bonuses, higher salaries, loan forgiveness, subsidized housing, CPD, career paths, health care, mentoring, peer matching) Profit-sharing between teachers and students for income-generating activities Teacher benefits (e.g. internet, mobile phones, transport) Employ mobile training units for rural areas Align training schedule with community availability
Persons with limited literacy	Persons who do not possess the skills required to recognize, comprehend, interpret, compute, and create printed and written materials in the context of everyday interactions, to the extent that this limits their full participation in society	Higher incidence of poverty, educational and social marginalization Limited accessibility of written training or curricular materials More likely to be employed in non-formal TVET	Mainstream persons with limited literacy into general TVET training programmes Develop appropriate CPD to upgrade teachers' and trainers' literacy skills Adapt curriculum to minimize exclusion of persons with limited literacy Employ flexible application processes (e.g. verbal, interviews)
Crisis-affected populations	Persons who have experienced crises (whether natural disasters, political crises or military conflict) which hinder their full and effective participation in society	Psychological trauma from conflict or crisis Separation from family and/or community High mobility (for displaced persons) Sensitive social and/or cultural dynamics Prior disruptions in education and training	Employ demand-driven training according to local needs Sensitize training content, schedule and approaches to local context Implement short-term/intensive programmes with clear objectives Recruit teachers and trainers from target populations Incorporate literacy and numeracy skills in training Offer additional support for persons with psychological trauma Train teachers to manage diverse (sometimes conflicting) groups

Teachers working with crisis-affected populations should be trained on the psychosocial impacts of trauma and how to identify students who need additional support. For some participants, attending training sessions may offer a venue to process their experience and begin to restore relationships. This opportunity should not be overlooked as it could serve as a catalyst for community dialogue and understanding. Given that low levels of education and high rates of unemployment can become a breeding ground for conflict, skills development plays a particularly important role for peace building prospects in fragile states (UNESCO, 2011).

The pertinence of student-centred approaches in TVET

Teaching and training materials are often out-dated and not relevant to what is needed for specific skills development. Too often teaching and training materials are of little relevance for what the students have to face in the world of work after they leave their refuge of (mostly) government-run technical vocational schools and institutions (Johanson and van Adams, 2004). More relevant labour market approaches would go beyond developing pure occupational standards, but would rely on real work and business processes as the basis for TVET learning. In a modern labour market with permanent innovations and the requirement for lifelong learning, the ability to self-learn in a team approach is equally or even more important than having a broad range of technical and vocational know-how learned from theoretical coursework and imitation of skills by learners (see Box 11).

Box 11: Employing student-centred approaches in the training of trainers, Denmark

In Denmark, Adult Vocational Training (AMU) methods take their starting point in the actual work situation of the trainees, class room teaching has more or less disappeared in favor of learning in workshops which resemble the work situation in a company. Every year, at least 15 per cent of the Danish labour force attends at least one AMU course, the courses vary from three to 60 days with an average of six to seven days. Advanced learning techniques are applied heavily in AMU programmes and strong emphasis is put on developing social and communicative skills.

Source: http://pub.uvm.dk/2002/training.pdf

New learning theories, which advocate the active involvement of learners in regulating their own learning progress, underpin arguments for a different role of teachers and trainers (as individuals and as staff members in professional organizations).[24] These theories are based on new insights from a variety of disciplines into how people deal with new information and develop new knowledge and competencies (Hmelo-Silver, 2004). They posit that in order for new information to be effectively retained and applied, it must be meaningful. Meaningful information, in turn, is developed in concrete contexts, for example in TVET in whole work- and business processes (Rauner and McLean, 2009). The new learning theories have also gained popularity for practical reasons: the volume of new knowledge and changes in the workplace have made it increasingly difficult for

[24] Prior learning theories were modeled on the factory assembly line, and envisaged students as passive recipients of knowledge from 'expert' teachers and trainers. Only teachers and trainers were seen as active, supplying relevant knowledge to passive learners.

individuals to obtain all the knowledge and skills they require at one particular stage of their (work) life, because there is simply too much to absorb at one go (Lee et al., 2004).

The only safe prediction that can be made with regards to future job profiles is that they will change. Contemporary professional job know-how will become obsolete in ever-shorter periods. Graduates of TVET programmes cannot always immediately come back and join the training system for another half year. As such, a key aspect is to train them to organize their own learning on the job and prepare them for lifelong learning. They need to learn technical and vocational contents without too much dependence on a trainer. Since students have to learn how to organize themselves, trainers and teachers must learn how to teach with a minimum of guidance (Axmann, 2004).

5. Pillar three: Innovation and progress

In modern dynamic economies characterized by oft-changing labour and skill needs, the promotion of innovation in both teacher training and classroom learning is crucial for preparing teachers and trainers to meaningfully employ innovative pedagogical practices and for empowering students to engage with and adapt to changing labour markets. This is true also for developing economies, as the evident skill needs of today may be rendered obsolete by the process of development and modernization.

When considering innovation in TVET teaching and training systems, it is helpful to distinguish three separate strata of innovation. First, an innovative programme or practice may be one that has never been attempted previously, whether in TVET, general education or other sectors. Second, innovation also includes the emulation of practices employed in other non-education sectors in educational systems (or TVET more specifically). Third, innovation can also be conceived as the transference of a particular educational practice or programme to a geographical area where it has not yet been employed. Both within and across the aforementioned strata, innovations in TVET teacher and trainer preparation systems can be classified among three categories: the use of emerging technologies in the workplace, pedagogical innovations and training–industry linkages.

Box 12: Adapting innovation and technology to TVET training, the Netherlands and Jamaica

In the Netherlands, emerging technologies and innovations are incorporated into a structured system of teacher training through the use of industry experts as guest teachers in TVET classrooms. These experts are invited to training centres to share the latest innovations and technology being utilized in the workplace.

In Jamaica, a ‘forlough period’ is provided each year for TVET teachers to visit leading industries and learn about new technology as part of their professional development.

Source: ILO, 2012b.

5.1 Key element seven: emerging technologies

The employment of emerging technologies in vocational programmes as well as their incorporation in teacher professional development is a critical component of teacher training systems in TVET, particularly considering the increasing demand for technological skills in labour markets. In terms of TVET provision and administration, it is clear that many processes can be streamlined and rendered more efficient through the

considered adoption of appropriate technology. Teachers and trainers also require relevant technological skills in order to meaningfully incorporate these into programme curricula and provide conceptual and pragmatic technological training for students, who will in turn be expected to employ these skills in the labour market.

The relevance of ICT continuing professional development, in-service or otherwise, to TVET is accentuated by the technological basis for much of such training, its complexity and constantly evolving nature. ICT-based learning is a case in point. Teachers and trainers are increasingly required (by policy or necessity) to incorporate ICT techniques in classroom or internet-based learning approaches and to organize participatory learning with "remote" (distance-learning) students who may in addition comprise a more diverse group in terms of age, ethnicity and educational background than they would normally be accustomed to teaching.

"Blended learning" as the combination of distance learning elements with in-class phases for teachers and trainers has found its way into TVET programme delivery as well as teacher professional development. Exploiting the new approaches requires new or upgraded skills, hence the importance of training to cope with these demands. In Hungary, ICT capacity is now a requirement of all industrial and vocational teachers, supported by a special information technology programme in vocational schools, curricula and training to support virtual learning environments (CEDEFOP, 2009: 95; ETF, 2006).

What precisely counts as emerging technology in teacher training systems will certainly depend on the national and sub-national context, and the availability and extent of technology therein. Thus, it is not inherently necessary that all teacher training system in all country contexts employ the latest cutting-edge technology in TVET training programmes, but rather that TVET providers adopt appropriate technologies for clear and well-defined purposes and outcomes (for examples of good practice in India, see Box 13). Moreover, emphasis should be placed on the acquisition of transferable skills and the attainment of a general familiarity with new technologies such that teachers and trainers can adapt as new technology requirements and approaches evolve. This approach necessitates not only familiarizing teachers and trainers with new technologies, but also inculcating an ethos of CPD throughout trainers' careers.

Box 13: Training trainers to meet the demands of emerging technology in India

While large-scale initiatives in training up trainers to meet emerging demands such as green skills appear to be limited in India, there are some individual case studies and examples of good practice.

***The Self-Employed Women's Association (SEWA)*:** SEWA has developed a Centre of Excellence through which it has developed a 'cadre of master trainers' who will train 200,000 members in green skills and will help them to start green enterprises (Nanavaty, 2009).

***The Government of Gujarat*:** The Government of Gujarat, through the Civil Engineering Department at Birla Vishvakarma Mahavidyalaya, offers a five-day training programme for trainers on *'Emerging Trends in Civil Engineering'*. This course covers areas such as zero energy buildings and sustainable water usage. It also encompasses specific technical areas such as new methods in geotechniques, mass rapid transport systems in urban areas and the use of fly ash and other waste materials (Government of Gujarat, 2011).

Source: Manipal City and Guilds, 2012.

5.2 Key element eight: pedagogical innovations

Vocational teacher training is not like pressing skills through a funnel, assuming that ready-made TVET teachers come out. On the contrary, it is an ongoing pedagogical process that can be initiated, challenged, supported, provoked, accompanied – in other words, pedagogically and didactically supported all along. The following principles should therefore guide pedagogical innovations (Axmann, 2002):

- Learning in vocational schools should always be related to real work and life experience of students;
- Learning to become a vocational teacher is a unique experience for everyone and requires permanent exercise and reflection;
- Learning to become TVET teachers is calling for teaching methods for adults and is based on peer learning, team work by means of high levels of self-organization and individual responsibilities;
- Learning strongly focuses on curricular-didactical competencies, methodological-communicative competencies and pedagogical-social competencies.

Vocational curricula, which in many countries tend to be prepared and set by government officials with little or no exposure to the world of work, represent another weak point in the learning chain. Worse, previously adopted curricula are oftentimes extended by incorporating new content without updating or removing outmoded, irrelevant material. Thus the gap between the TVET training system and employment needs and opportunities keeps widening when the question of 'what to train?' is defined by closed-circuit training provider systems (Axmann, 2004).

In addition, there remains a strong and nearly ubiquitous tendency, particularly in transition and developing countries, to equate teaching and training in TVET with pure lecturing. However, this is often the least suitable means for preparing participants for lifelong learning in modern economies and complex labour markets where new problems and as of yet unknown job and skill requirements necessitate ongoing problem-solving without external coaching. This underlines again the critical role played by teamwork and self-learning capacity for present and future workplace responses. The opening up of the pedagogical–method box in TVET and effective application of new teaching and learning approaches therefore could be a means of liberalizing learning for teachers and trainers. It also offers a much more relevant and effective way of acquiring competencies that is appreciated by enterprises, students, teachers and trainers and trade unions, precisely because of its relevance and validity for the transition from TVET institutions to work.

A recent example of this are the Regional Training Centre (ROC) teacher training academies in the Netherlands, which provide 60 hours of schooling and professional improvement each year to keep teachers' knowledge and skills up to date (ILO, 2012b). These academies give priority to updating teachers' pedagogical skills and conceptual knowledge over practical professional skills. Conceptually, the ROC academy movement considers that the quality of teachers is the responsibility of the employer (i.e. the educational institutions), but that it is also in teachers' own interest that they keep their professional interests up to date.

In Mexico, the recent reform of the Technological Baccalaureate (BTe), implemented by the OECD Centre for Educational Research and Innovation (CERI) and the Government of Mexico's Secretaria de Educación Publica (SEP), introduced substantial changes in, among other areas, teachers' and trainers' pedagogic methods employed in the classroom (OECD-CERI, 2009b). Reform centred on curricular changes from focusing on learning inputs to learning outcomes, as well as training trainers in student-centred teaching approaches. In addition to these innovations, the national reform introduced

stronger evaluation and support methods for teachers and trainers. Boxes 14 and 15 highlight other examples of pedagogical innovations in TVET from Zambia and Serbia.

Box 14: Zambia - Curricular innovation through institutional autonomy

A decade ago, the Government of Zambia changed its role from provider of training to financer, regulator and coordinator. As part of the reform, the Government transferred control of public training institutions to autonomous management boards, part of a broader central government devolution of authority to local authorities. The new management boards were given responsibility for curriculum decisions, maintenance of training standards established by the TVET authority (TEVETA), and institutional administration. Staff members of public training institutions were removed from the government payroll, though over a two- to three-year period the Government agreed to continue paying the salaries of staff members opting to continue working under the autonomous management boards. Thereafter, formerly public training institutions were expected to compete for financing on the basis of quality, cost-effectiveness and responsiveness to demand.

Source: Johanson and van Adams, 2004.

Box 15: Serbia - Promoting pedagogical innovation through TVET reform

In recent years a traditionally university-heavy technical and pedagogical training programme for future TVET teachers, with little or no non-academic work experience prior to teaching in the more than 300 TVET schools in Serbia, has begun to be reformed by the Ministry of Education (MoE) in Serbia in close collaboration with the EU and with other bilateral partners.

The reforms included introducing a new system of in-service teacher training, which was only offered sporadically up to 2000. In 2006 and 2007 a comprehensive in-service TVET teacher training programme was set up in three sectors of TVET (wood processing, catering and tourism, and information technology) and eight occupationally specific courses consisting of general courses on vocational pedagogy and didactics, sector specific training for TVET instructors and organized internships for teachers in those three sectors. The MoE reforms focused on new and better TVET teaching methods, greater attention to innovation, fund-raising, improving communications and relations between schools and their “clients” (such as local businesses, local municipalities, labour market offices and employment services, parents, students and other regional stakeholders).

Job placement, job guidance (including tracer studies), skills and training needs analysis and regional labour market analysis were also part of the reform approach. More than 1,000 TVET teachers out of a total of about 15,000 TVET teachers in Serbia have been trained under this programme based on a package of 27 in-service teacher training days. These were jointly developed and carried out by more than 40 master trainers who now serve as a pool of experienced TVET teacher trainers in Serbia and work very closely with the MoE and the national TVET centre.

Source: Ministry of Education, Republic of Serbia, 2010.

5.3 Key element nine: core skills of teachers and trainers

The role of teachers and trainers in TVET has evolved significantly in recent years as innovation and new technologies redefine the world of work. Their roles and responsibilities have been redefined, requiring teachers and trainers to combine many professional elements with those of active stakeholders in TVET (CEDEFOP, 2009; ETF, 2006; Grootings and Nielsen, 2005; OECD-CERI, 2009a). Furthermore, teachers and trainers are challenged to move from traditional roles as lecturers in domain-specific expert

knowledge towards that of facilitators and coaches of learning processes in skills development (Grootings and Nielsen, 2005: 13). These transitions also require teacher training programmes to adapt to change via new policies and structures so as to prepare trainers for their new and constantly evolving roles.

Balancing supply of skills with demand in the labour market constitutes one of the fundamental issues in skills development policy. Historically, however, since economic and technological change worldwide accelerated in the 1980s the inability of most TVET systems to adequately respond to these challenges can mostly be seen as a major skills mismatch due to an insufficient demand orientation in TVET. This is even more troublesome, since the demand for skilled labour has risen significantly as a result of globalization, changes in technology, the organization of work, new development policies, including the transition to a low carbon economy, and the recent international financial crises and subsequent recession in many countries.

In this present environment, many observers contend that different individual skills sets are needed. A more complete skills mix incorporates many generic skills such as the ability to think logically, to plan precisely, to anticipate difficulties and to be innovative and creative so as develop and update the "necessary capacities and skills [individuals] need to enable them to be productively employed for their personal fulfilment and the common well-being" (ILO, 2008b: 9). This skill combination equips an individual to be better prepared for the world of work and increases chances for greater employment and income opportunities for all citizens, resulting in good living standards and social progress. There is an increase in demand for a more skilled labour force, with more autonomous, adaptable and multi-functional workers. But the question remains: what incentives can be established to encourage training providers to organize training around this enhanced labour market and societal orientation?

The concept of competency-based TVET training tends to put more emphasis on the traditional notion of skills (see Box 16), which are largely technical in nature and presuppose that initial and continuing teacher training focuses mostly on subject matter knowledge.

Conversely, many employers place more importance on the overall competence of individuals and especially on their ability to communicate, to solve problems, and to work in teams, in addition to technical skills, as part of a holistic skills package. In many countries, nevertheless, most skills gained during TVET training are too narrow in scope and lack overall context, whereas competencies acquired over a work lifetime are still very often developed on the job, in both the formal and the informal economy. Good practices do exist, however, such as SENAI in Brazil (see Box 17).

In addition, more effective delivery of TVET as well as assessment of its functional outcomes through cooperation in TVET systems between enterprises and schools and with other stakeholders is still far from being applied and there is room for growth. The sharing of responsibility with employment stakeholders, especially when it comes to certification, measuring output-orientation of learning and better recognition of prior learning can still be much improved (Allais et al., 2009).

Box 16: What is competency-based training?

When vocational trainers are asked why they train individuals on what they train them, some honest answers may be along the lines of: this is what vocational teachers and trainers know best, or how they personally enjoy training people, or because this is what they found in the relevant text books.

For competency-based training (CBT), however, the answer would probably be that this is taught because this is what the students need most in order to access decent work in the work place, both immediately and later in their work life. This highlights the fact that CBT must be both relevant to the labour market and that the resulting job is actually a decent one. Both aspects are at the core of CBT.

CBT aims to acquire pre-specified levels of competence in a given field or occupation. This is done through teaching students a series of 'competencies,' or designated work activities performed to a specific standard under specific conditions. The evaluation then is based on the student's ability to master the required competency or competencies within a specific course. Once a student has successfully demonstrated mastery of a specific competency, he or she may advance to the next competency. Competencies in a CBT approach can be plentiful and easily surpass 100 or even different levels in one occupation.

Four essential characteristics of CBT systems are the following:

- Criteria to be used in assessing achievement and the conditions under which achievement will be assessed are explicitly stated and made public in advance.
- The instructional programme provides for the individual development and evaluation of each of the competencies specified.
- Participants progress through the instructional programme at their own rate by demonstrating the attainment of the specified competencies.
- In vocational education and training, people are considered to be competent when they are able to apply their knowledge (K), skills (S) and attitudes (A) – termed KSA – to successfully complete work activities to the standards of performance expected in the workplace.

Source: Knapp, 2013.

Instead, in many countries, TVET and existing labour market policies do not always facilitate the school to work transition, thereby handicapping young people especially in obtaining a head start in working life. For TVET systems to become more flexible and responsive to new skill demands, which tend to be difficult to foresee and increasingly diversified, there must be certain incentives for the stakeholders in the training system as well as those in key employment planning and decision-making roles. The latter would include employment services, a labour market institution that is a crucial link between the training provided, labour requirements and responsiveness to labour market conditions, therefore also for teachers/trainers and students in order to make informed choices in the teaching/training dynamic. Accordingly, the key question is: what kinds of reforms are needed to address the lack of cooperation and create greater synergies between skills development producers and employers, both public and private, in ways that render the transition from education and training to employment more responsive to labour market needs. In so doing, gender issues should also be considered; evidence from ILO school-to-work transition surveys shows that in a number of countries young women have a more protracted and difficult transition to working life than young men (Matsumoto and Elder, 2010). At least one set of responses has been provided in a recent ILO policy dialogue forum on sectoral training strategies.

Box 17: SENAI's development of teachers, technicians and managers in Brazil

Brazil's National Service for Industrial Training (SENAI) recognizes that the development of teachers, technicians and managers in TVET is an essential part of modern vocational programmes. As such, teacher training programmes offer pre-service and professional development courses which comprise technical aptitude and pedagogic expertise. SENAI promotes the continuous evaluation and training of TVET teachers by:

- Implementing a Strategic Planning which includes a BSc (balanced scorecard) system and a PDCA (plan-do-check-act) down to the classroom.
- A programme of increasing the quality of education which includes: 1) pedagogic programmes; 2) E-learning programmes for teachers; 3) skills-oriented educational programmes; and 4) continuous evaluation of performance of students and of the teaching-learning process.
- Digital Inclusion -This programme aims at ensuring computer literacy and access to communication media, software and applications.

Source: www.senai.br

6. Pillar four: Representation and communication

The Joint ILO/UNESCO Committee of Experts on teachers (CEART) has termed social dialogue which leads to ameliorated working conditions as "the glue for successful educational reform", for it enables teachers to make use of skills learned through training. The CEART defines social dialogue in education based on ILO concepts: "Social dialogue is understood to mean all forms of information sharing, consultation and negotiation between educational authorities, public and private, and teachers and their democratically elected representatives in teachers' organizations" (ILO/UNESCO, 2003: 6-7). The main goal of social dialogue is to promote consensus-building between and democratic involvement among the main stakeholders in the world of work, such that working conditions are made better through inclusive and transparent processes.

Defining good policy and modes of TVET delivery and skills strategies that meet a country's expectations for sustainable development goals, especially in times of great change, is enhanced by strong and effective social dialogue mechanisms (ILO, 2008a: 1; 2008c: 9-10; 2009a: 8). Mechanisms based on tripartism – governments, employers/enterprises and their organizations and workers/trade unions – permit an institutionalized expression of interests and views that help shape policies and strategies more closely tied to the world of work to which TVET contributes. They also build important political and financial support for TVET. This balance between different points of view through the give and take of social dialogue, combined with the engagement of TVET providers – public and private institutions, researchers, teachers and trainers, further contributes to aligning policy and practice and avoids that the dominance of any one constituent's interests skew overall policy away from the general interest.

Key elements of social dialogue in TVET teacher and trainer preparation systems include traditional mechanisms of social dialogue (e.g. tripartite negotiation of terms and conditions of employment, policy development, strategic planning and implementation), stakeholder knowledge of labour rights and responsibilities, and knowledge-sharing mechanisms.

6.1 Key element ten: Social dialogue

Without full involvement of teachers and their organizations, who are those most responsible for implementing reform, in key aspects of educational objectives and policies, education systems have difficulties to fully achieve reforms. In its 2009 review of the state of social dialogue in education, the CEART concluded that, based on international surveys it reviewed, progress has been made in recent years but the exercise of social dialogue runs the gamut from highly positive to very limited or non-existent depending on the country and region, even though it can be demonstrated to have a positive impact on educational governance. Moreover, the CEART observed that pressures on education systems in times of economic crisis are best addressed through social dialogue mechanisms at national and international level (ILO/UNESCO, 2010: 2), echoing conclusions by the ILO's tripartite constituents noted above in the framework of the Global Jobs Pact.

There is little evidence to suggest that the picture is any different in TVET. Specialists on TVET in European and neighbouring countries have described a process in which change is usually "something 'done to' teachers as opposed to something 'done with' them", and have called for teachers and trainers to be more fully engaged as stakeholders in TVET reform decisions (Grootings and Nielsen, 2005: 11-14, 32). Even in European countries, many with a dynamic social dialogue tradition and strong institutional frameworks, TVET teacher and trainer involvement in system or institutional decision-making through their teachers' union varies greatly. They are hampered by, for example, the minority position of TVET teachers/organizations within a unified teacher union, or by capacity issues related to size and resources. There is also little evidence that teachers play any significant role via professional associations,[25] another collective form of representation (Parsons et al., 2009: 120, 123). The importance of such associations and forums for exchange among TVET practitioners is examined in further detail below.

Nevertheless, there is general consensus that social dialogue is vital to healthy TVET policy formulation and implementation. Social dialogue should operate both on the broader policy and operational issues of TVET by engaging the social partners, and within TVET systems and institutions between employers, national or institutional such as school boards, and trade unions representing teachers and trainers.

The diversity of national experiences implies diversity in the frameworks or processes for social dialogue in TVET. Collective bargaining can and should be used by TVET teachers and trainers as a valuable tool for negotiating a variety of issues relating to conditions of work. Sectoral social dialogue is increasingly crucial to align TVET operations with national or local labour market needs. Positive examples of national, subnational or sectoral bodies for social dialogue on TVET policy and practice are numerous and include:

- tripartite advisory councils/commissions on TVET strategies, policies, qualification, assessment and training standards and curricula;
- industrial training boards or skills councils/commissions to identify and advise on workforce development and skills needs; and
- tripartite councils/commissions to manage training funds, advise on government tax incentives or develop targeted labour market intervention tools, notably for youth and economically or socially disadvantaged population groups.

[25] Professional associations differ from teachers' unions in that they are special interest groups that share joint interest, exchange teaching materials, organize workshops and publish articles and magazines.

Such bodies are built around tripartite social dialogue and in many cases are funded by governments and fully engage social partners in their policy advisory or operational functions.

Effective social dialogue depends on recognition of its importance by all concerned parties, respect for rights and principles of freedom of association, organization and participation in decision-making for the social partners as set out in international labour standards and in the international standards on teachers, adequately funded and supported institutional frameworks or processes, and assistance where necessary to build and sustain the capacity of TVET stakeholders to meaningfully engage in social dialogue.

Where social dialogue institutions or frameworks are effectively embedded in the institutional culture of a country, they may provide stability in policies and practices on TVET issues that transcend short-term political changes and/or assist in the management of difficult economic conditions created by structural adjustment measures for example. International information exchanges, financial and technical assistance can contribute to more sustainable social dialogue institutions and frameworks within small and developing nations in particular.

The scope of social dialogue on TVET issues is broad, at least in many high-income countries, ranging from advice to decisions on overall TVET policy, organization, governance and financing. The OECD (OECD-CERI, 2009a: 42, 100–101) has found social partner involvement in the form of advice or decision-making on TVET matters (curricula, training content and duration, competency and qualification assessments, examinations and accreditation of learning) in half of its member countries surveyed in 2009, although such engagement with regard to change management and innovation seems less robust (Parsons et al., 2009). Some countries have extended national social dialogue on TVET or skills policies and measures to regional or sectoral level.[26]

Outside of OECD member countries, social partners' engagement on TVET issues via social dialogue appears to be less common, largely due to weaker institutional frameworks.[27] In Tunisia a strategic development component and policies involving social partners in vocational training management and quality delivery have been implemented (Nielsen and Nikolovska, 2007: 43). The South African Government launched a national consultation with social partners and training providers on a new skills strategy in 2010 that requires an increased role for business and labour in the country in the form of "demonstrable high-level engagement ... at the highest level" before sectoral skills plans formulated by the Sectoral Education and Training Authorities (SETAs) are approved (DHET, RSA, 2010: 8). Despite weaknesses at present in a large number of countries, as the centrality of skills development and TVET provision in national policy agendas grows, so will the likelihood of more social partner involvement as well, provided there is political will, institutionalized mechanisms and necessary capacity-building support for the social partners to meaningfully engage. A consensus on basic prerequisites for social dialogue was adopted at the International Labour Conference in 2002 (ILO, 2002).

[26] See Annex 9 for brief country examples of social dialogue in TVET discussed at the 2011 ILO Global Dialogue Forum. See also Annex 10 for social dialogue mechanisms in TVET and skills development in OECD member countries.

[27] Brazil is a notable exception with its highly developed SENAI and related systems.

Social dialogue to shape teacher training and continuing professional development (CPD)

On a set of issues at the heart of TVET improvement – initial teacher education, more robust qualification systems, assessment and CPD to maintain professional competencies – informal or formal social dialogue mechanisms do seem to function in a diverse group of countries, though not universally. The implementation of competence framework guidelines (competences, standards and assessments) for TVET teachers in the Netherlands benefitted from grassroots inputs in which Dutch teachers' unions, collectively with other professional groupings of teachers, formed an open professional organization, the SBL (Association for the Professional Quality of Teachers) to comment on and thereby widen teacher (practitioner) engagement in shaping the framework. On the other hand, the small size and capacity of the Estonian vocational teachers' association formed in 2004 seems to have impeded an active role in the reform programme aimed mainly at professionalizing the TVET teacher training structure (strengthening a weak pedagogical base and lack of focus on learner-centred practices). In Greece, a technology teachers' association was formed by practitioners a few years ago to provide for a distinctive voice in influencing TVET policy and professional development issues with an eye to also improving teachers' status; it was reportedly influential in discussions leading to the ministerial decree on the new accreditation system for TVET trainers in 2007 (Parsons et al., 2009: 122–123).[28]

Social dialogue on employment and careers in TVET

In line with international labour standards and the Recommendations concerning the status of teachers, social dialogue at work takes many forms, of which negotiation, often in the form of collective bargaining, is the highest expression, since representing a binding agreement achieved not infrequently through difficult negotiations and compromise. Collective bargaining or its negotiating equivalent in other legal frameworks may co-exist in education with consultative forms of social dialogue on education policy in addition to its well-understood use to determine terms and conditions of employment. For example, collective agreements have served to concretize an agreed consensus concerning reforms that link employment terms, careers and professional development. A national collective bargaining agreement in Bulgaria effective in 2007 and renegotiated in 2008 covering all teachers up to secondary level includes provisions for CPD. It also guarantees the right for teachers' unions and employers to receive preliminary information from the Ministry of Education on any proposed cuts in teacher positions, prior to discussing opportunities for teachers subject to lay-offs to acquire additional qualifications that facilitate redeployment in education (ETUCE, 2009: 47).[29]

Employment security and tenure, important for issues of academic freedom, professional responsibility and stability in learning environments (ILO/UNESCO, 1966; 2007; 2010; UNESCO, 1997), may raise barriers to reforms if TVET systems do not also encourage and recognize the willingness and ability of teachers and trainers to adapt to change. Usually, after two or three years of teaching, TVET personnel in public institutions are given lifetime tenure if they satisfy established criteria. However, such guarantees are helped by accompanying them with strong appraisal systems to ensure

[28] The available information does not permit a detailed analysis of social dialogue mechanisms directed towards teacher–trainer professional issues in countries outside Europe. There is no reason to consider that it is absent in other high-, middle- or low-income countries, particularly those with established mechanisms permitting such dialogue, but the evidence available on the subject is lacking.

[29] Most collective bargaining agreements between local or provincial/state education authorities and teachers' unions in Canada and the United States include some provisions on careers, CPD and related matters.

respect for professional standards and a certain measure of accountability to institutional norms and student expectations so as to strengthen good teaching and learning environments. This is an area where engaging teachers and trainers through their organizations in designing and putting into place appraisal and accountability measures helps to achieve the right balance.

A strategy on skills development and lifelong learning prepared by employers' representatives for the G20 in 2010 emphasized the importance of employers' contributions to public policies, notably by: providing training; encouraging policies that match education and training to the needs of the labour market; encouraging and supporting lifelong learning; and maintaining the relevance of continuous learning through education and training by means of constant evaluation and system improvements. The strategy calls for: governments to create more vocational education and training schools or options within mainstream schools, better integrated in education systems with bridges to universities; more enterprise-based apprenticeships; active engagement of businesses in vocational education and training programmes by means of industry advice, work placements and participation in management boards; public–private partnerships to maximize use of resources and expertise, especially in developing countries; and more research on vocational training as a basis for future-oriented policies (IOE and BIAC, 2010: 3).

As for the workers' representatives' engagement in TVET planning and application, their competence and their ability depend largely on the strength of the labour movement, but cases show that they can play a very active role, especially in TVET systems of European and other OECD countries (Egger and Sengenberger, 2003; OECD-CERI, 2009a). Trade unions have called for: government policies to include a clear focus on vocational training, an essential element to ensure full participation in work and life for young workers in particular; international development agencies and banks to prioritize support for vocational training for young workers; and trade unions to campaign for transition from the educational system to work and trade union participation in educational activities during the final school years (ITUC, 2010: 2). The international organization of teachers, Education International (EI), has stressed that governments should invest in vocational education and training as part of the response to the global economic crisis, creating more not fewer opportunities to train young people, up-skill the current workforce, and encourage lifelong learning across society (EI, 2009). As with employers and enterprises, however, greater efforts are needed to get trade unions involved in actively designing TVET policies by means of social dialogue.

Of importance to the future of a healthy TVET system able to adapt to new and recurrent challenges will be the extent of negotiated solutions on workplace conditions that underpin and reinforce both systemic reforms and excellence in teaching and training. In that sense, the experience of negotiated solutions to difficult choices over how to reduce budget deficits provoked by the economic recession has not been encouraging. Recent country situations point to a general lack of negotiations, even in some cases refusal to negotiate on teaching jobs, salary and pension reductions that have marked European (for instance, Greece, Hungary, Ireland, Latvia, Romania) and some other countries since 2009 (see ILO, 2009f for an earlier survey). In contrast, in support of reforms to South Africa's further education system undertaken in 2006, the Education and Labour Relations Council (ELRC) has taken a lead in negotiating agreements on staff transfer to new further education and training colleges, as well as agreements on remuneration, careers, qualifications and teacher retention measures (Box 18).

Box 18: South Africa: Negotiating TVET conditions to support reform

South Africa's Education Labour Relations Council (ELRC) provides a forum for consultations and negotiations on workplace matters, including further education and training, between the country's national and regional education employers and teachers' unions, and is frequently cited as an institutional model of good practice on the African continent. To support restructuring of the 150 apartheid-era technical colleges into 50 further education and training colleges, the introduction of a new curriculum, learning approaches and other reforms for a modern economy, the ELRC negotiated agreements on staff transfers in 2007. In the context of a major challenge to attract and retain qualified lecturers, in particular those of specialized subjects, it has continued such work by establishing a special bargaining unit within the ELRC for Further Education, lecturers and creating a task force of employers – the Government and representatives of the College Employers Association – and teachers' unions to develop: a framework of a new salary structure career path for lecturers; measures for improvement of lecturer qualifications through training and development; and a new performance management and reward system for lecturers.

Source: ELRC http://www.elrc.org.za/

TVET and transnational social dialogue

Although nascent, the traditional focus of social dialogue on education matters within national frameworks could also expand in the future to regional or international levels. This may take the form of simple exchanges of information within a targeted process of social dialogue on TVET reforms that can nevertheless serve as important policy learning tools. South Africa's ELRC recently organized an international study visit to several European and Asian countries in the framework of the country's initiative to revitalize the further education and training sector noted above. Employers and unions visited countries noted for their further education and skills development programmes in order to learn about institutional mechanisms for vocational education and training, governance structures, funding, programmes and students. A particular focus was put on learning about policies for revitalizing the teaching profession, including reward systems that are more effective in providing incentives for highly accomplished teaching, for keeping excellent teachers working in classrooms, and for providing educational leadership (ELRC, 2010).

6.2 Key element eleven: labour rights

A prerequisite of effective and transparent social dialogue is the knowledge, both academic and practical, of labour rights and their pragmatic implications for labour relations in a particular context. Indeed, informed dialogue between social partners cannot logically begin without a clear understanding of current rights that have been both adopted and implemented (as well as the extent of their implementation), those that have been adopted but remain unimplemented and those that have not yet been adopted. Such knowledge necessarily includes international frameworks (e.g. ILO Conventions, Recommendations and international labour standards), national legislation and policies, and local agreements between stakeholders. In those conventions and legislations you should find clear information on: the right to unionize and demonstrate, the right to parental, family or pregnancy leave, hours of work, overtime pay, insurance, vacation pay, termination notice and/or pay and minimum wages. For teachers and trainers certain rights should also be considered such as freedom from discrimination, academic freedom and the freedom of association (ILO, 2012c: 87). It is the responsibility of the state as well as the schools' administrations to implement working conditions for teachers and trainers that enhance those labour rights to the maximum.

It should also encompass content knowledge of labour rights and the pragmatic awareness of dialogue mechanisms through which this knowledge can be put into practice. The lack of such knowledge is often a significant cause of low participation in social dialogue on the part of teachers and their organizations, but it cannot be solely incumbent upon teachers and trainers to self-evolve into labour rights experts in addition to their other primary responsibilities. If TVET teacher training programmes hold some responsibility for inculcating an ethos of social dialogue amongst trainers and facilitating links between other social partners, they should also incorporate labour rights and issues in pre-service training modules. Designers of training curricula (which should also include teachers and trainers) should be encouraged to review basic labour laws and workers' rights, and be provided with practical suggestions on how these can be meaningfully integrated into training curricula.

The ILO can provide such services through technical assistance and training that can be adapted for teacher training systems in TVET, as highlighted in Box 19.

Box 19: Awareness-raising on labour rights and international frameworks through ILO technical assistance and training

ILO officials or other experts help countries address problems in legislation and practice in order to bring them into line with the obligations under ratified instruments. Forms of technical assistance include advisory and direct contact missions, during which ILO officials meet government officials to discuss problems in the application of standards with the aim of finding solutions; and promotional activities, including seminars and national workshops, with the purpose of raising awareness of standards, developing national actors' capacity to use them, and providing technical advice on how to apply them to the benefit of all. The ILO also provides assistance in drafting national legislation in line with its standards.

The International Training Centre in Turin, Italy, offers training on international labour standards for government officials, employers, workers, lawyers, judges and legal educators, as well as specialized courses on labour standards, productivity improvement and enterprise development, international labour standards and globalization, and the rights of women workers.

Source: http://www.ilo.org/global/standards/applying-and-promoting-international-labour-standards/technical-assistance-and-training/lang--en/index.htm

As mentioned earlier, it is the government's role to implement favourable working conditions for the teachers and trainers. But the responsible authorities should also produce a code of conduct for them to clearly state the teachers and trainers' responsibilities. Elements to take into account while creating such a document are: "accountability to employing authorities, either different government levels or school authorities; accountability and commitment to pupils, parents and the community; general behaviour and attitude; relations with educational authorities and co-workers based on respect; relations with students and parents in the framework of mutual respect, professional autonomy and responsibility" (ILO, 2012c: 99). If both sides respect each other rights and duties, there will be stronger synergies between them and good labour practices will be put in place.

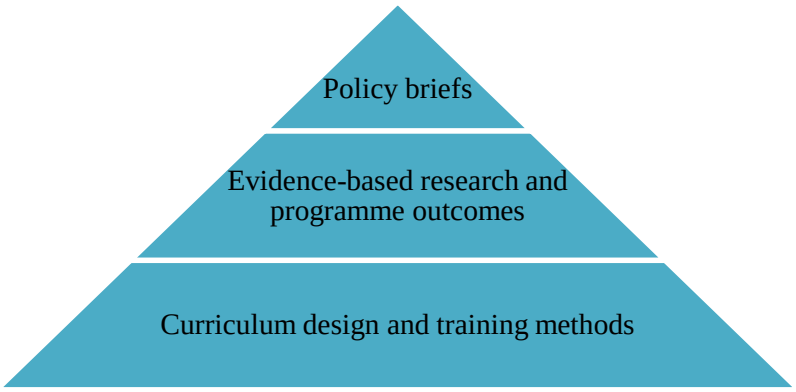
Labour rights principles apply outside the classroom as well. Apart from being clearly stated in the teachers and trainer's contract, there should be some official structures to strengthen and/or respond to labour rights violations (i.e. websites, hotlines, a government office, responsible for the dissemination of information and resources to assure the rights are being respected and if not, where the teachers and trainers should go to get some help).

6.3 Key element twelve: knowledge-sharing

Knowledge-sharing networks

There are many different objectives and venues for knowledge-sharing. In considering knowledge-sharing within the field of TVET, it can be conceptualized as a pyramid. The apex is comprised of concise, targeted information to inform the development of policy and skills strategies such as policy briefs; the middle includes evidence-based research and programme outcomes that illustrates how or why something works; and the bottom consists of the vast wealth of information shared among practitioners relating to curriculum design and training methods (see Figure 6).

Figure 6: Pyramid of knowledge-sharing



This section focuses primarily on the bases of the pyramid: that is, the knowledge-sharing and information exchange among practitioners.[30] These networks can play a vital role in allowing trainers to exchange ideas on curriculum design, learn how to integrate new technologies, get feedback on specific challenges, share programme experiences, and develop connections with fellow practitioners.

In particular, the usage of ICT is rapidly expanding the possibilities for knowledge-sharing. Online discussion forums allow practitioners to exchange ideas and gain feedback from a much wider audience than previously possible; online databases enable much more rapid and widespread dissemination of training modules, teaching resources, and research. Online conferences such as those hosted annually by UNEVOC[31] offer a valuable forum for professional development. ICT increases opportunities for South-South knowledge-sharing and highlights the common challenges and solutions in skills development across diverse regions. Additionally ICT allows for the possibility of distance and blended learning, broadening access and offering greater flexibility for training both instructors and students. Such avenues for increasing competencies can be particularly important for trainers in rural settings.

[30] This is distinct from forums that exist to provide teacher training or to bring together policymakers or to conduct research on specific topics in TVET. Though these are vital activities, such networks serve a different purpose from 'trainer-oriented' networks.

[31] UNEVOC is the United Nations International Centre for Technical and Vocational Education and Training. The Centre assists member States to develop policies and practices concerning education for the world of work and skills development for employability and citizenship to achieve: access for all; high quality, relevant and effective programmes; learning opportunities throughout life.

Contributing success factors identified at the G20 Training Strategy Knowledge-Sharing Workshop on Skills for Employment in Turin in May 2011 highlight the importance of network relevancy to its target constituency (see Table 2).

Table 2: Success factors for knowledge-sharing networks

• clear understanding of goals and functions • easy and free access to online resources • high quality of research and/or resources available • dissemination of knowledge produced • inclusion of different language groups • input from many collaborators • participation of different social partners	• institutional support • promotion of TVET both nationally and internationally • in-country partnerships • enhanced use of ICT • sharing of new trends • overall network sustainability

Global networks[32]

Knowledge sharing at the international level highlights the common challenges and solutions in skills development across diverse regions. It increases opportunities for comparative understanding and South-South and Triangular cooperation. In the international arena, there are various knowledge-sharing platforms that have been established to facilitate exchange among teachers and trainers.

Regional networks

Regional TVET networks can play an important role in allowing for comparison and coordination of approaches within a specific region. They can enhance the portability of skills through inter-regional recognition of training institutions and certification of skills. In some cases, such networks also facilitate skills anticipation among neighbouring countries within a certain region and contribute to the development of a language-specific resource base and exchange among TVET teachers and trainers. Box 20 illustrates this potential for capacity building and knowledge-sharing at the regional level.

National networks

Many countries have one or more networks established at the national level to facilitate exchange among TVET teachers and trainers. These networks can play a particularly important role for practitioners in discussing and reviewing national policies, providing and receiving guidance on national data collection and reporting procedures, and understanding the role and changing dynamics of TVET at the national level. National conferences on TVET provide opportunities for teachers and trainers to engage in CPD and learn about innovations in pedagogy, workplaces, and ICT. National recognition of individuals and organizations for their contributions to TVET can also serve as a venue for connecting the TVET community and sharing good practices. Recognising different institutions can reinforce the role of various stakeholders in national skills development.

[32] Annex 11 provides specific examples of global, regional, national and local knowledge-sharing networks, their activities and purposes.

Box 20: Regional cooperation platform for vocational education and teacher training in the ASEAN region

In 2009, China, Viet Nam, Laos and Thailand founded the Regional Cooperation Platform Training and In-Service Training of Teachers and Managers in Vocational Schools in Asia (RCP). Despite high growth rates, there are shortcomings in the vocational training systems of all the countries involved in the RCP. National reforms and modernization processes as well as mutual recognition of education systems and teaching qualifications are often still in their infancy. The same is true of training for vocational school teachers and managers.

Objective

The Institute of Vocational Training and select South-East Asian specialist institutes use the regional platform for joint research and consultancy on vocational education.

Approach

In preparation for the programme, RCP members (especially universities and ministries of education) receive support in developing and establishing appropriate platforms for mutual exchange as well as working formats, such as working groups, conferences and in-service training courses. They also receive assistance in establishing management structures and constructing websites. Systematic learning, mutual consultancy and in-service training are facilitated.

Conferences, particularly in the ASEAN countries, working groups and joint projects permit the exchange of know-how on vocational school teacher training. The advantages and disadvantages of various education systems, focusing more on the needs of the labour market and harmonization of educational qualifications are discussed in detail and dealt with efficiently.

Results achieved

- Regional cooperation and integration enhanced
- Greater awareness of the importance of regional exchanges among specialist institutions
- Four specialist conferences attended by more than 100 participants each, and a number of workshops and training courses, have contributed to more systematic networking, communication and cooperation
- Conference topics, content, new methods (e.g. open space technology, collegial consulting) now applied in the work of specialist institutions
- Organizational processes, training material and methods improved through working groups and a shared website
- Results shared with all members and have improved performance in training, research and consultancy
- Training more practice-oriented: better-trained vocational school teachers and managers increase quality of teaching and learning processes
- Master's degree course established in Laos based on Thai model

Source: http://www.rcp-platform.com/

National TVET networks can also be a useful point of contact for engaging practitioners as stakeholders and including their input in the development, implementation, and evaluation of national skills strategies. Teacher and trainer representatives from national networks should be included in social dialogue forums to help inform and shape the direction of new policies and developments in TVET at the national level. Such collaboration ensures that teachers and trainers feel ownership over the adoption of TVET reforms, thereby facilitating the implementation process.

Local networks

Finally, it is vital to recognize that the majority of teachers and trainers will not likely be engaged in knowledge-sharing at a global, regional, or even national level given time and resource constraints. Other networks and associations may be organized at a more local level within a state, province, school district, or community. These networks provide valuable forums for exchange with other TVET teachers who understand the local educational system and work in similar contexts. They can support CPD for teachers and trainers by organizing conferences and workshops locally.

Beyond knowledge-sharing, these networks can play an important role in recruiting people to the TVET profession and advocating for technical and vocational teachers' rights and greater value for the profession at a local level. Additionally, the coordination of a teacher mentorship programme for new TVET teachers or mid-career professionals entering the field could be valuable activity in which these networks could engage. This becomes particularly relevant as initial training courses are shortened in an effort to deal with TVET teacher shortages. TVET practitioners may be more inclined to get involved at a local level if they feel that these networks are involved with issues that more directly impact them.

Regarding knowledge-sharing among trainers in the informal economy, this constitutes an area where greater research is needed to understand the types and extent of networks that are available and accessed. Presently there is some limited evidence as to the role of local networks for teachers and trainers in the informal economy. Particularly in parts of Africa, sector-specific crafts associations bring together many master craftspersons who provide training through traditional apprenticeships. These associations have played a role in bringing some standardization to traditional apprenticeships with regard to length and structure. Some associations even offer informal skills testing and award certifications to acknowledge the skills acquired by an apprentice under the tutelage of a master craftsperson (Haan, 2006). This has brought about discussion and debate in some crafts associations in several countries including Mali, Benin, and Cameroon as to the training and skill needs of master craftspersons within these associations (Walther, 2011).

This network of informal associations should also be recognized for the valuable role they could potentially play in further developing the training skills of the master craftspersons among their membership. Short training courses could upgrade skills by increasing literacy and numeracy levels, introducing new technologies and innovations, and teaching the integration of theoretical instruction along with the practical training component inherent in traditional apprenticeships.

Box 21: Conclusions from the Global Dialogue Forum on Vocational Education and Training, September 2010

The Global Dialogue Forum (GDF) on Vocational Education and Training in September 2010 focused on employment and the working environment in the sector as well as the larger lifelong learning framework to which public and private vocational education and training contributed. Consensus points on challenges concerning teachers and trainers in TVET include the following.

Initial education and professional development of TVET teachers and trainers

- TVET teachers and trainers should have technical and pedagogical qualifications as expert teachers and experience in industry.
- "Building bridges" between countries with effective TVET teacher training systems and those seeking to invest in new TVET teacher training structures is desirable.

Employment in TVET

- TVET faces continued qualified teacher shortages in many countries. To improve recruitment and retention, a comprehensive package of high initial and continual training standards, competitive remuneration, attractive teaching conditions and the necessary infrastructure and equipment to support high learning outcomes is essential.
- Human resource policies of public and private TVET providers should actively seek to encourage employment of qualified women and minorities, while upholding the principle of appointment by merit. Attention needs to be paid to breaking barriers to equal opportunity.
- Employment security and tenure are important factors underpinning quality service provision, job satisfaction, recruitment and retention. Excessive recourse to "casual" contract teachers can undermine system and institutional objectives and high professional status. At the same time, employment security cannot be absolutely guaranteed.
- Where teacher or trainer jobs are eliminated for financial or professional reasons, good human resource policies call for alternative training and placement measures.

Remuneration and the teaching and learning environment

- Current remuneration packages in a large number of countries are not enough to attract sufficient numbers of teacher/trainer candidates, or to retain experienced staff. Moreover, they often do not reflect the importance of their work, and may not be competitive.
- Teacher workload should be defined with reference to the full range of responsibilities, including instructional and preparation time, project work and workplace exchanges.
- A well-financed TVET infrastructure with up-to-date training equipment is critical to learning quality and relevance. Governments have primary responsibility for ensuring the necessary investments to achieve this, but public-private partnerships are also an important means of supplementing and supporting TVET institutions.

Social dialogue in TVET

- Social dialogue is vital to healthy TVET policy formulation and implementation. Social dialogue should operate both on the broader policy and operational issues of TVET, and within TVET systems and institutions.
- Sectoral social dialogue is increasingly crucial to align TVET operations with national or local labour market needs.
- Effective social dialogue depends on: universal recognition of its importance; respect for rights and freedom of association; organization and participation in decision-making for the social partners as set out in international standards; adequately funded and supported institutional frameworks or processes; and assistance where necessary to build and sustain the capacity of TVET stakeholders to meaningfully engage in dialogue.

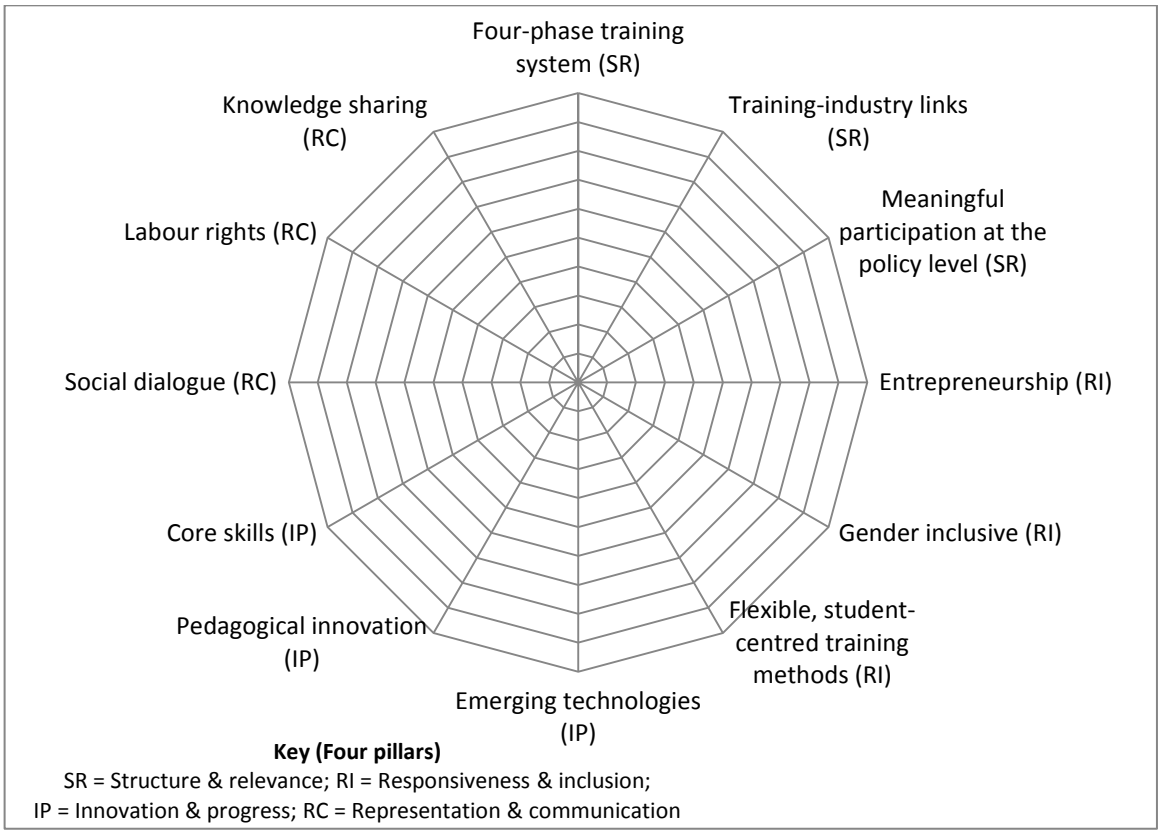
7. Conclusion: The way forward

Using the four pillars and 12 key elements as a self-diagnostic tool for teaching training systems

The four pillars and 12 key elements identified and discussed throughout this paper are designed to serve as a self-assessment rubric against which countries can evaluate their TVET teacher training systems and thereby identify areas for interventions. The spider web chart below (Figure 7) is a self-diagnostic tool that policymakers, researchers, practitioners and others use to evaluate the strengths and weaknesses of TVET teacher training. It can be used in a national or institutional context, or a variety of other settings.

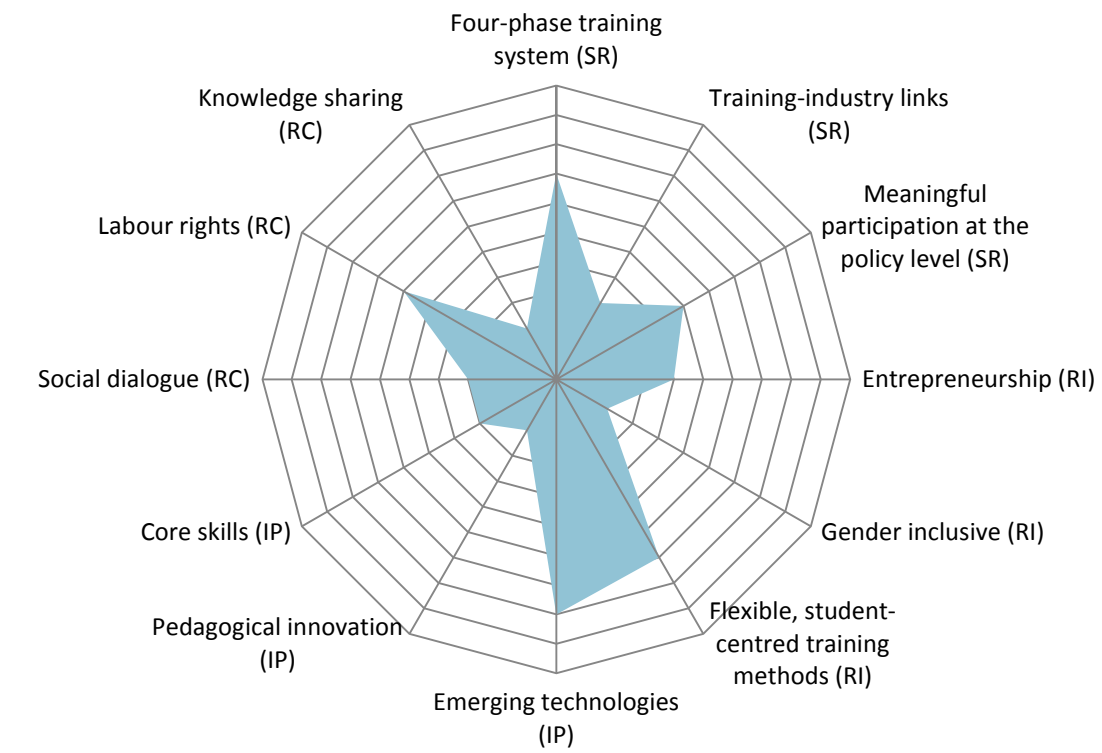
Within the chart, each element is presented on a scale from one to ten, with ten being the highest rating. Elements that feature prominently and function well within a training system would receive a high rating, whereas any elements that are particularly weak within the system would be rated much lower. Each element should be plotted according to its rating by placing a data point on the corresponding axis. A line should then be drawn between each set of connecting dots to provide an overview of the entire system, as in Figure 7. In principle, the larger the resulting dodecagon, the stronger the system. Key elements that rate closer to the centre of the chart, however, highlight areas for targeted improvement strategies.

Figure 7: Twelve key elements of teacher training self-diagnostic tool[33]



[33] See Annex 12 for a reproducible version of this figure.

Figure 8: Self-diagnostic of hypothetical national TVET teacher training system



Key (four pillars)
SR = structure & relevance; RI = responsiveness & inclusion;
IP = innovation & progress; RC = representation & communication

This chart and assessment exercise have been used in various workshops and training conducted by the Skills and Employability Branch of the ILO and have proven to be an effective tool in allowing participants to evaluate their own teacher training systems.

A logical next step in the process for policymakers, researchers, practitioners and other stakeholders, after using the spider web chart to evaluate the strengths and weaknesses of TVET teacher training, is to determine what actions need to be taken to strengthen target areas. While specific metrics for measuring the key elements within the chart do not currently exist, reviewing existing quantitative data and reinforcing the collection of such data is an important starting point.

Specific areas for quantitative data collection within TVET teacher training systems include recruitment and retention rates, remuneration, and levels of education for teachers and trainers. Other indicators such as class size, average working hours, and workplace health and safety should also be captured. This information should be disaggregated by gender, age and location. Special attention should be given to capturing the training differentials between rural and urban areas, particularly in developing countries where fewer educational opportunities exist. The number of persons with disabilities in TVET, both as trainers and as trainees, should be captured to evaluate the progress towards mainstreaming this group in TVET.

To provide a more complete picture of gender-balance and areas for improvement in TVET, data collection would need to go even further. For training institutions that are separated by gender, data should be recorded and reported separately as such. Overall numbers of male and female trainers according to technical or vocational subject area

should be recorded including those providing training in emerging sectors. This information compared with the number of female training graduates in these sectors who found employment in the field they were trained in will provide insight on the evolution of occupational segregation. The number of women in management in TVET is also important to record as an indicator of the influence of women in programme design and supervision.

Finally, much of the information provided in this paper has centred on the teachers and trainers in formal TVET settings based on range of data available. Much more information is needed on skills development in the informal economy and the role of teachers and trainers therein. This is increasingly important in many developing countries as the size of the informal economy continues to grow. While systems are not currently in place for collecting reliable quantitative data in this area, further investment in this area should be considered for the valuable insight it could offer on the specific skills development needs of both trainers and learners in the informal economy.

Monitoring and evaluation – good practices in teacher training

This is a critical time to monitor and evaluate current policies and practices aimed at equipping these individuals with the skills and knowledge they need to provide quality training that can meet the needs of tomorrow's labour market. Monitoring and evaluation should seek to provide further understanding on what works, how it works and why it works. It should also include qualitative feedback from the stakeholders involved. The documentation of good practices and creation of an evidence base then provides for the possibilities of replication in other countries or contexts.

Useful areas for further evaluation would be the effectiveness of approaches by teachers and trainers towards the inclusion of disadvantaged groups in training programmes with particular constituencies targeted such young women, persons with low literacy, and persons with disabilities, rural populations, and conflict-affected populations. Unless useful new strategies are adopted to target these groups, they will continue to miss out on training and skills development opportunities, thereby perpetuating a long history of educational and economic marginalization.

Greater monitoring and evaluation should be undertaken to determine the impact of knowledge-sharing networks among trainers. Of the networks that currently exist, few have conducted evaluative measures to gain feedback from their members. These networks, when adequately supported and accessed, can play a valuable role in the knowledge-sharing and professional development of teachers and trainers in TVET.

More initiatives supporting CPD for TVET teachers and trainers should be evaluated for their impact and relevance on training. Follow-up on CPD should assess to what extent trainers utilize new skills and methods in their coursework as well as the impact of professional development initiatives on student performance outcomes and the relevance of training to the labour market.

Monitoring and evaluation - social dialogue in teacher training

One of the strengths of successful demand-driven schemes in vocational education and training is the active participation of social partners in the design and the implementation of programmes. Involving employers and trade unions by institutional means in assessing rapidly changing requirements of labour markets and designing programmes that respond to employment and workplace protection needs is widely

perceived to be necessary to TVET system responsiveness (CEDEFOP, 2009; ILO, 2008c, 2010c, 2010d; OECD-CERI, 2009a).

Monitoring and evaluation is a valuable, ongoing process that should be used to inform and improve social dialogue. To ensure greater understanding, the criteria for evaluation must be agreed by all social partners, in particular whether the focus will be on the outcomes as well as the process of social dialogue. Establishing agreed criteria for the evaluation of social dialogue should be done at the beginning of the process.

Data collection is another important step in the process of monitoring and evaluating social dialogue and should be undertaken by the social partners as a matter of course, possibly with some assistance from third parties (e.g. specialist government agencies or independent researchers commissioned to examine specific social dialogue processes or outcomes). The latter might be particularly important when remedial action is needed to address deficiencies in the social dialogue or to help resolve conflicts between the social partners. It is important to reinforce the understanding that the primary aims of social dialogue are to build trust and credible commitments between the social partners, as well as to promote democratic involvement and provide a setting for more efficient bargaining. Active monitoring and evaluation helps to ensure that the process of social dialogue yields the greatest returns and enhances the field of TVET and its many stakeholders.

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Annexes

Annex 1: Examples of teacher training in formal TVET

Australia

Training and Further Education (TAFE) is Australia's largest provider of vocational education and training in a learning environment different from university. The network of TAFE colleges across Australia offers courses designed for young people preparing for their first job, people looking to train or retrain and those preparing for university studies. TAFE courses provide students with practical skills transferable to the workplace and are usually set around industry training packages. Most TAFE courses are developed with industry, and tuition fees are charged.

Courses are taught by certified teachers and trainers in the TAFE system. As for example in the state of South Australia, in order to become a teacher in a TAFE College, teachers/trainers are required to:

- undergo university studies to master's degree level in their field of specialization;
- complete an approved teacher education programme in Australia;
- have between three and six years of vocational experience and/or experience above the minimum vocational and/or industrial experience prescribed for the teaching position;
- take a selection of on-going in-service teacher training programmes offered by the respective Departments of Labour in each Australian state.

Source: GSA-TAFESA, 2010.

Germany

Teacher training in TVET in Germany is composed of different stages:

- university studies of at least three years in a vocational major (e.g. electrical engineering) and a non-vocational minor subject (e.g. Spanish), as well as in pedagogy;
- obligatory 12-months work experience;
- a two-year pre-service teacher training programme at a vocational education teacher training institute (VETTI) combining work as a vocational school teacher with seminars in the major and minor areas of specialization; and
- on-going in-service training programmes in technical areas, vocational pedagogy and new technologies.

The first three stages can be combined in different ways. However, the two-year pre-service teacher training programme always completes the initial TVET teacher training chain and finishes with an external State Board Exam for TVET teaching.

The final two-year pre-service teacher training (some states (Länder) have one-year programmes) brings together the theoretical experiences from university studies with TVET teaching and training in schools by developing the identity of the teachers as experts in vocational teaching. It emphasizes reflective learning, project work, work- and business-process related learning, development of occupational competencies, trial-run teaching

situations, "micro-teaching"[34], self-organized learning and innovative teaching methods. An external second State Board Exam rounds off the first three phases and if successfully passed, marks the entry into TVET teaching and training.

Following the Bologna Declaration new models of pre-service TVET teacher training in Germany are under discussion (see Bünning and Shilela, 2006).

Source: Axmann, 2002.

Saudi Arabia

The three-year bachelor programme in Saudi Arabia combines a theoretical component in one of the six targeted "vocational disciplines" (business administration, information technology, electrical technology, mechanical technology, automotive technology and construction technology) with vocational pedagogy (learning how to teach technical subjects and carrying out micro-teaching situations in front of other teachers), company field practice (internships for teachers in enterprises), vocational field practice (trial-run teaching situations in real TVET classes) and a practical bachelor project (e.g. planning, carrying out and evaluating sequences of teaching or planning tracer studies for students from TVET schools).

The technical subjects in the vocational discipline streams are carried out in three stages: basic modules of the vocational field (e.g. research methodology in business administration); basic specialities (e.g. marketing project in accounting); and advanced specialities (e.g. international marketing). The more practical elements of company-based field practice and vocational field practice balance theoretical and practical elements of the teacher training programme. Vocational pedagogy focuses on the main elements of work- and business-related processes relating to occupational challenges within each vocational discipline.

Source: TTC, 2010; Saudi Arabia GDDDC, 2010.

Serbia

In recent years a traditionally university-heavy technical and pedagogical training programme for future TVET teachers, with little or no non-academic work experience prior to teaching in the more than 300 TVET schools in Serbia, has begun to be reformed by the Ministry of Education (MoE) in Serbia in close collaboration with the European Union (EU) and with other bi-lateral partners.

The reforms included introducing a new system of in-service teacher training, which was only offered sporadically up to the year 2000. In 2006 and 2007 a comprehensive in-service TVET teacher training programme was set up in three sectors of TVET (wood processing, catering and tourism, and information technology) and eight occupationally-specific courses consisting of general courses on vocational pedagogy and didactics, sector specific training for TVET instructors and organized internships for teachers in those three sectors. The MoE reforms focused on new and better TVET teaching methods, greater attention to innovation, fund-raising, improving communications and relations between schools and their "clients" (such as local businesses, local municipalities, labour market offices and employment services, parents, students and other regional stakeholders).

[34] Micro teachings are peer teaching experiments carried out in the presence of other teachers for short sequences (e.g. 15 minutes) in teacher training situations.

Job placement, job guidance (including tracer studies), skills and training needs analysis and regional labour market analysis were also part of the reform approach. More than 1000 TVET teachers out of a total of about 15,000 TVET teachers in Serbia have been trained under this programme, based on a package of 27 in-service teacher training days. These were jointly developed and carried out by more than 40 master trainers who now serve as a pool of experienced TVET teacher trainers in Serbia and work very closely with the MoE and the national TVET Centre.

Source: Ministry of Education, Republic of Serbia, 2010.

Annex 2: Examples of teacher training in informal TVET

Benin

The Bureau d'Appui aux Artisans (BAA) is improving the quality and results of the apprenticeship training system in Benin through complementary training for traditional apprenticeships, both for the apprentices and master craftsperson. The Swiss Agency for Development and Cooperation (SDC) is providing external support. BAA's ultimate objective is to break the cycle of "incomplete" skills development of traditional apprentices who later become masters who are not adequately equipped to train their apprentices.

Organization and implementation

The BAA works mainly through ISAs (Informal Sector Associations) such as Association Professionnelle des Artisans du Bois de Cotonou and l'Union Professionnelle des Artisans Tourneurs, Fraiseurs et Forgerons de Porto-Novo. It links the master craftspersons who are members of these ISAs, as well as their apprentices, with local training centres, either a public sector training provider or an NGO. BAA is the catalyst, financier, and technical adviser; the ISAs are the main implementers.

The training is directed first at apprentices of master craftspersons who are members of the ISA. The masters can propose two of their apprentices for the training. The apprentices need to have minimum basic education, be in their second year of training, and have at least two more years remaining. The masters must guarantee that the selected apprentices will be in a position to follow the training regularly, and the apprentices must sign their agreement to this guarantee.

Master craftspersons are also eligible for training, especially skills upgrading, through groups of 20–30 masters formed by the participating ISAs. Their main motivation to participate is to ensure that they are not surpassed by their apprentices once the apprentices have finished their training. Most of the training takes place in the workshop of one of the participating master craftspersons at spare hours (afternoons and weekends) and lasts almost two years.

Results and impact

No data on impact were available. Master craftspersons benefited from the complementary training as it enhanced their technical, pedagogical, and management skills and they became gradually convinced of the need to strengthen their apprenticeship training. The master craftspersons admitted afterwards that the training had changed their approach and methods for apprenticeship training. Apprentices who have received complementary training have become more precise, responsible, serious, confident, and attracted to work well done.

Lessons

On the basis of limited information, some preliminary lessons can be noted:

• Master craftspersons are not familiar with the notion of complementary training, for themselves or for their apprentices, and they need to be carefully shown the benefits of such training.

• Master craftspersons who allow their apprentices to follow additional training tend to have the most dynamic workshops and a real need for skilled workers.

• Apprentices who have followed the training acquired more authority and assumed new responsibilities in the workshop and took more pride in their status.

• Involving existing NGO and public sector training providers in complementary training for master craftspersons and apprentices makes it necessary to improve equipment, enhance the technical skills of the instructors, and adapt teaching methodologies.

Source: Haan and Serrière, 2002: 84–87.

Kenya

With US$320,000 in assistance from Appropriate Technology and the United Kingdom, the Kenyan NGO SITE ran a project from 1996 to 1998 to improve traditional apprenticeship training. The objectives were to upgrade the technical and managerial skills of master craftspersons to enable them to diversify their production; strengthen the capacity of master craftspersons to provide quality training to their apprentices; and strengthen the capacity of selected vocational training institutes to provide on-going training to master craftspersons.

Implementation

The project started with a market trends survey from which metalworking, woodworking, and textiles were selected as its priority subsectors, based on their potential for growth and job creation. The survey also identified entrepreneurs' skill gaps. Some 20 trainers from vocational training institutes were taught to transfer skills to the participating entrepreneurs. The project suffered an initial setback when the master craftspersons ("host trainers") displayed little interest in upgrading their technical skills. This prompted an important change in the project approach. The training was refocused on direct business improvement for the entrepreneurs, training content and delivery were made flexible, and overall management of training was added for the master craftspersons. The master craftspersons were recruited through Jua Kali associations, a quicker and less costly route than individual recruitment. Other changes in the project design were to build up the basic training of host trainers first, then broaden it to skills and theory; to use apprentices as sales representatives for their enterprises, thus exposing them to the wider aspects of running a business; to reduce the involvement of vocational training institutes, as their reorientation was beyond the project's mandate and capability; and to de-emphasize the credit component in view of the limited capacity to follow up and recover loans through the project.

During the project, 43 courses were designed and conducted for host trainers, including 3 on teaching methods, 8 on business skills, and 20 on technical skills. In all, 420 master craftspersons and 280 apprentices were trained directly and approximately 1, 608 apprentices received improved training from the project's host trainers. In addition, training materials and videos were produced. Over the project period, the costs of running the training courses were cut by between 60 and 90 per cent. Cost recovery was increased from less than 10 per cent at the start of the project to 77 per cent toward the end (excluding development costs).

Results and impact

Host trainers improved their training of apprentices by eliminating gaps in enrollment, reducing the time and costs of training, improving content and quality, and concentrating training on productive activities. The master craftspersons involved increased their number of apprentices by between 15 per cent and 20 per cent, and employment of the participating SMEs increased by 22 per cent. In addition, 88 per cent of the master craftspersons applied their new skills; 73 per cent made new or improved products; and 58 per cent penetrated new markets. They achieved a 57 per cent increase in turnover and a 25 per cent increase in profits and improved their workshop layouts and organization of production.

Lessons

The main lessons from this project intervention are as follows:

1. Master craftspersons are not immediately interested in receiving skills training and need to be "hooked." This training has to be put in the broader context of business improvement and the transfer of marketable skills into tangible gains. Training has to be delivered in a flexible manner, taking into account the opportunity cost of the labour and the time of the participating master craftspersons.
2. Master craftspersons seek training not mainly to increase fees for traditional apprenticeships but to increase income from productive aspects of the business.
3. Training interventions proved a useful entry point for upgrading the technology of SMEs.
4. Linkages with vocational training institutes proved disappointing— they did not become sustainable providers of training to Jua Kali.
5. Independent trainers could be promoted as providers of training services to the informal sector. This is probably a more sustainable approach than working through vocational training institutes, which, as now structured, appear to have little potential for promoting employment in the informal sector.
6. Collaboration with informal sector associations is of prime importance.
7. Upgrading informal sector enterprises is possible and practical through carefully targeted skills development. Application of new skills appears to result in increased growth, innovation, and productivity.

Source: Haan, 2001: 61–65.

Uganda

The United Nations Industrial Development Organization (UNIDO) is assisting a project to train master craftspersons in Uganda. The project seeks to provide demand-driven and sustainable advisory services to SMEs, "star" entrepreneurs operating at district level in the project's priority sectors—metalworking, carpentry and masonry, electrical installation and electronics, textiles, food processing, and leather products. The two-year budget for the project is US$877,000, funded by the Danish aid agency, DANIDA, and the Japanese aid agency, JICA. Local institutions involved are the Uganda Small-Scale Industries Association, the Gatsby Trust, two training centers of the Department of Industrial Training, and sectoral support centers.

Implementation

The project started with consultation workshops with some 600 small producers in six districts. They agreed to pay a fee of USh 5,000 to USh 10,000 per day for quality advice

and skills training. The selection of candidates to be trained as advisers to SMEs was based in part on their acceptances as advisers by their peers. Since 1999, about 180 master craftspersons have been trained as trainers. Their training encompassed adult learning principles, setting of training objectives, training methods, training needs assessment, task analysis, curricula development, and demonstration techniques. Based on performance assessment and visits to workshops, the number of prospective advisers was cut to 109, who then went on for a second round of training and upgrading of technical skills. Training took a month, full time, at the participating vocational training centers. The next phase of training included "industrial extension," that is, production management and planning (product sampling, plant layout), human resource management, financial management, marketing for competitiveness, and an in-plant study of an actual enterprise. In all, some 20 advisers per district will be trained, 3 per economic sector. The advisory services are, for the time being, a sideline activity and the master craftspersons will continue their own business activities.

Results and impact

The master craftspersons have started their own advisory services. In addition to in-plant advice, they conduct training needs assessments with local vocational training centers and set up skills upgrading courses for local producers. As an indication of interest in such training, when there are too few participants to cover break-even costs of the course, the prospective training participants have been willing to pay more to make up the difference.

Lessons

The main lesson of the project is that master craftspersons trained as advisers to SMEs have grasped the idea that those businesses can improve their operations and that they, the trainers, can help them do it.

Source: Haan, 2001: 110–111.

Annex 3: Example of pre-service TVET teacher training modules of the vocational education teacher training institute, Oldenburg, Germany

Table 3: Pre-service TVET teacher training modules of the Vocational Education Teacher Training Institute, Germany

Compulsory modules	Optional modules	Additional qualifications	Special modules
100 hours	**20 hours**	**80 hours**	
First teaching experiences	Quality management	Office communication	Chamber of commerce workshop
Independent teaching	Project management	IT history	Labour rights
Professional teaching	Professional feedback	Disability pedagogy	Violence prevention

Source: Studienseminar Oldenburg, http://www.studienseminar-ol-bbs.de

Annex 4: Stages of TVET teacher training

The following table provides an overview of possible learning outcomes at different stages of TVET teacher training with respect to university studies, non-academic work experience, industry and service work experience, pre-service teacher training and in-service teacher training or CPD.

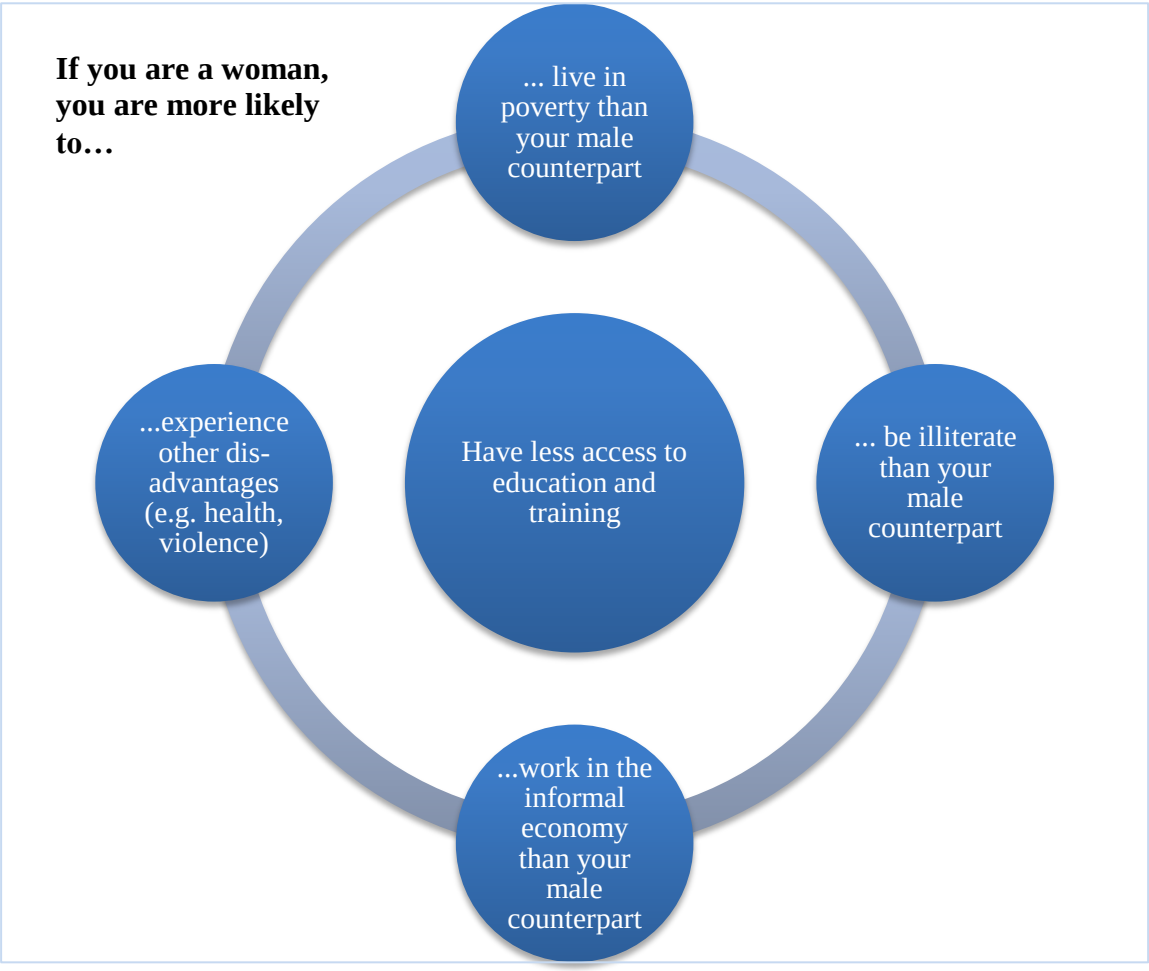
Table 4: Stages of TVET teacher training and possible learning outcomes

Industry or service work experience	Post-secondary or tertiary	Non-academic work experience	Pre-service teacher training	In-service teacher training/CPD
Engineers	Basic principles and knowledge of the vocational discipline developed	The range of skills and competencies for future TVET students expanded	"Identity" as a TVET teacher and trainer vs. identification as engineers, economists or master artisans developed	Assessment competencies such as learning strategies, systematic problem-solving and self-evaluation improved
Master artisans	Further specialization in a vocational discipline	Real-work situations	Assess prior knowledge level/competencies of student groups as a basis for choosing appropriate training assignments	Encourage elements of entrepreneurship development, such as leading students through the necessary phases of starting a wholesale company
Technicians	Techniques of scientific work and research	Plan, carry out and evaluate a whole work cycle	Apply vocational pedagogy and didactics for effective teaching and learning	Analyse technical content for potential of discovery learning in TVET
Business consultants	Vocational pedagogy and didactics	Understand work- and business processes in a field of specialization	Understand how to include real-work processes as starting points of TVET teaching and learning	Help TVET students to improve collection of new information from given sources (print material, hands-on experiments, internet research, etc.)
Entrepreneurs	An understanding of work- and business processes in the vocational discipline	Problem-solving in the field	Combine theoretical knowledge from tertiary institutions with self-developed practical work experiences; design projects/assignments with a balanced ratio of known and unknown occupational content or pieces of information as well as appropriate levels of learning	Structure learning opportunities to permit TVET students to acquire competencies in different areas

Annex 5: Why women face additional barriers in accessing education and training

To fully understand the disadvantages facing women, it is vital to recognize the intersection between gender, illiteracy, poverty, and economic marginalization prevalent in the urban informal and rural economy. Approximately two thirds of the 774 million adult illiterates worldwide are women – the same proportion for the past 20 years and across most regions (UN DESA, 2010). Of the world's 1.3 billion people living in poverty, an estimated 64 per cent are women (ILO, 2011d). When looking at the broad measure of informal employment, most countries show higher percentages of women than men engaged in informal work (ILO, 2010f). Particularly in developing countries, women are more likely to face intersecting layers of disadvantage, creating even greater barriers to education and training (Figure 9).

Figure 9: Intersectionality: How it impacts women's access to education and training



Women also find themselves with numerous demands on their time, balancing commitments to work, family and community. Even when women enter the labour market, in many cases working full-time or holding multiple jobs, they are still seen as carrying the primary responsibility for care of the family and involvement in the community. This complex division of responsibilities to the workplace, to the family and to the community means there is often little time or energy left over for undertaking additional commitments such as personal development, education or training initiatives. These patterns can also reinforce traditional gender divisions in occupational choices and labour market outcomes (see Table 5)

Table 5: Comparing average earnings and earning differentials across male- and female-dominated occupations, selected countries

	Earnings, male-dominated occupations (national currency)	**Earnings, female-dominated occupations** (national currency)	**Gender wage differential (%)**
Cuba (2007)	2.0	2.0	0.0
Thailand (2006)	11,870.8	11,275.5	5.0
Poland (2006)	2,307.5	2,183.8	5.4
Finland (2006)	2,566.2	2,162.5	15.7
Latvia (2005)	253.5	212.3	16.3
Jordan (2006)	248.0	200.3	19.2
Romania (2005)	869.7	670.8	22.9
United Kingdom (2007)	438.6	327.4	25.4
Australia (2006)	1,140.0	849.3	25.5
Korea, Rep (2006)	2,216,099.0	1,596,338.0	28.0
Portugal (2006)	1,061.5	745.1	29.8
Slovakia (2006)	18,598.8	11,971.0	35.6
Peru (2006)	1,642.4	1,040.9	36.6
Moldova, Rep (2007)	2,844.4	1,617.8	43.1

Source: ILO, 2010f.

Box 22: Ways to improve access to and quality of training for women

The monitoring [of the ILO] shows that many governments are indeed seeing upgrading the skills of women as a winning element. What does it require?

- Enhancing access of adolescent and young girls to quality formal and non-formal education programmes, including vocational technical training;
- Girls and women must have equal opportunities as boys and men for vocational education, training and skills development connected to the world of work and the evolving reality of labour markets, enterprises and workplaces where new technologies will be key;
- Tackling societal perceptions that tend to stream girls into non-scientific courses that ultimately restrict their choice of jobs and employability, and in tandem address the occupational segregation of traditionally accepted "male" and "female" jobs by opening them up to both sexes;
- Facilitating the transition of young women and men from school to work, taking into account that young women (who are increasingly doing better in school than young men) face greater barriers entering the labour force;
- Instituting systems for recognition and certification of formally or informally acquired skills and competencies, because the portability of skills makes it easier for both male and female workers to move into new jobs that may emerge; and
- Targeting particularly disadvantaged groups of women through specially designed skills training programmes, for example, through catch-up technical courses, community-based and mobile training programmes to reach women in the informal economy.

Juan Somavia, Director-General of the ILO,
International Women's Day, 7 March 2011.

Annex 6: Chart of disabilities, implications and examples of accommodation

Table 6: Disabilities, implications for training and examples of accommodation

Type	Examples of disability	Examples of assistive devices, interventions and disability specific training	Examples of learning and work implications	Examples of accommodations
Physical disabilities: Includes a range of limitations that affect some aspect of physical functioning (walking, manual dexterity, strength, etc.)	A mobility impairment resulting from a missing limb, a spinal cord injury, back problem etc.; a manual dexterity impairment related to arthritis, muscle weakness from disease or injury; or overall weakness or respiratory problems related to a variety of illness, etc. Neurological problems could cause seizures or behavioural problems.	Wheelchair; tricycle, prosthetic limbs, medication to control seizures, etc.	Depends on nature of the physical impairment. Many have no learning implications; for others equipment or working/learning environment may need to be adapted. Those with strength and other limitations, respiratory problems, etc. will need specific considerations in selecting types of jobs.	Raised work table; access to an accessible toilet; removal of physical obstacles from pathways; easy to operate doors and drawer handles; foot or hand pedals instead of the reverse for those with amputations.
Sensory/communication disabilities: Include difficulty seeing, hearing or speaking.	A person could have low vision, often undetected in developing countries, or be completely blind, have a hearing impairment or be completely deaf.	Braille, white cane and mobility training for the blind (so they learn to move around independently); sign language instruction for deaf; hearing aids for those with hearing impairments.	See specific learning methods; clearly some adaptations needed for most disabilities of this nature. In case of speech impairment use of writing, computer or just patience on part of listener may be needed.	Braille printing, large print materials, sign language, clear pathways for blind, special seating arrangements near instructors or speakers.
Intellectual: Refers to one's cognitive ability and capacity to learn as quickly as others and to retain	Down's Syndrome	Pre-vocational and independently living training.	People with intellectual disabilities can learn but they may need to have things	Longer training periods, use of pictures, one to one on the job training or job coaching.

information. Intellectual impairments often result from birth, brain damage, lack of nutrition in early life or a variety of factors.			repeated or have tasks broken down into small steps.	
Learning disabilities: Refers to people of normal intelligence but who process information or learn in ways that are different than others. For example, they may have difficulty processing and remembering numbers, comprehending the written word or with processing auditory information.	Dyslexia, Attention deficit disorder	Specific training provided in study skills and adaptive techniques (usually only available in more developed countries)	Different teaching methods are sometimes used with such individuals. However, in many developing countries learning disabilities are not detected or are confused with intellectual disabilities. Since all people have preferred learning styles, it is best to use a variety of training approaches.	Using written or oral instruction depending on how someone learns best or processes information.
Psychosocial disabilities: Refers to disabilities that could result in unusual or different behaviours, emotions or thinking patterns or that interfere with day to day functioning.	Traumatic stress disorder; depression; bipolar disorder (extreme high and low moods that have an impact on behaviour)	May undergo medical treatment or counselling to adapt to impairment and learn coping mechanisms	Anxiety or stress could affect learning so that some adaptations may be needed on an individual basis	Job coaching; creating more stress free environment and evaluation settings; providing additional encouragement

Source: ILO, 2009b

Annex 7: Examples of training programme accommodations in rural areas, and for conflict affected populations

Crisis-affected populations

Haiti: Supporting crisis-affected populations through skills development

Following the earthquake in January 2010, the ILO has worked closely with the Haitian government and other international agencies to address the acute shortage of economic opportunities for the crisis-affected populations in Port-au-Prince and the surrounding areas. Starting in late 2010, the ILO continues to be actively involved in provided training and job creation within the framework of a debris removal project, supporting economic growth through the recycling and reuse of debris created by the earthquake. In 2011, the ILO begin working on the "16 neighbourhoods – 6 camps" project which targets skills development and improved technical competencies in the construction sector to provide sustainable housing to thousands of IDP who continue living in tent camps even two years after the earthquake.

Capitalizing on the knowledge gained from these interventions, the ILO will continue to support training and skills development in Haiti through a larger, multi-sectoral project based on the G20 Training Strategy. The strategic focus of the project is organized into two main pillars: training, which will focus on improving the technical aspect of training programmes; and employability, which will seek to enhance the transition from training to employment. Additionally the project is strengthened through two integrated capacity-building components: institutional reinforcement, which will develop the capacities of training institutions and ensure long-term sustainability; and monitoring and evaluation, which will assess project outcomes, coordination and social dialogue among stakeholders, and documentation of best practices and lessons learned. By working jointly with employer, worker, and government representatives, the ILO continues to be engaged in Haiti's recovery and long-term development following the earthquake.

Africa: The Youth Education Pack, an integrated training programme for crisis-affected populations

The Youth Education Pack (YEP) is a one-year full time programme with three equally important components, literacy/numeracy, life skills and (vocational) skills training.

The objectives are for the learners to:

1. Become functionally literate, mastering basic and relevant literacy and numeracy.
2. Obtain knowledge and awareness that will further their development and awareness as individuals and as members of their societies.
3. Acquire a skill that is needed in their communities and that will increase their chances of finding apprenticeships or paid work.

YEP learners include the more vulnerable among the NRC (Norwegian Refugee Council) target groups, but who still have the possibility of spending a year of full time in

school. Priority is given to young single mothers, youth heads of households and those with the poorest educational background.

The YEP has been implemented to address the educational needs of refugee and internally displaced youth in a variety of crisis-affected countries including Sierra Leone, Burundi, DR Congo, Liberia, Sudan, and Uganda.

Rural populations

The Education for Rural People Flagship

Recognizing the ongoing challenges in providing quality education and training programmes in rural areas, the Education for Rural People (ERP) Flagship was launched in Johannesburg in 2002 at the World Summit for Sustainable Development. ERP is a network of about 390 partners including governments, international agencies, civil society, the media and the private sector with the FAO as the UN lead agency. According to its website, "ERP is a worldwide call to action to foster rural peoples' capacity to be food secure and to manage natural resources in a sustainable way through increased access to quality education and skills training for all rural children, youth and adults."

In addition to research and network building, ERP also supports rural education and skills development through an online toolkit which "provides education and training materials for rural teachers, technicians, instructors, trainers, parents, researchers, extensionists and others involved in formal and non-formal education for rural people." The resources in the toolkit cover a wide variety of topics from fisheries to land rights to book-keeping to gender. The resources are all available online and free of charge.

Source: Food and Agricultural Organization, http://www.fao.org/erp/

The Philippines: Mobile training initiatives

The Technical Education and Skills Development Authority (TESDA) in the Philippines is bringing technical education and skills development right to the doorsteps of the people with its training on wheels programme expected to be launched in early 2012.

Using two buses donated by Genesis Transport Services Inc., TESDA will roll out mobile training in select areas to make the agency's programmes and services more accessible and more affordable especially to the poor.

"We aim to bring TESDA's programmes and services closer to those who would most likely benefit from them. To reach the grassroots requires that we venture and explore other opportunities to better serve our neediest and deserving constituents," Villanueva said.

TESDA Director General Joel Villanueva said the buses will be transformed into mobile classrooms, equipped with the necessary facilities found in a typical training center for the training of poor people in remote and far-flung communities. Aside from this, the buses will also serve as mobile assessment centers for those who seek to have their qualifications stamped with TESDA's seal of excellence.

Source: http://www.tesda.gov.ph

Table 7: Recruiting and retaining qualified teachers in rural areas: several country examples

Incentives for teachers in rural areas			
Malaysia	**Lao PDR**	**Uganda**	**Mozambique**
Incentive package including land and supplemental agricultural training	Profit-sharing among teachers and students in income-generating activities	Hardship allowance of 20 per cent of salary for qualified teachers in "hard-to-reach" areas	Bonus payments of up to 100 per cent of salary for qualified teachers

Source: World Bank, 2008.

Annex 8: TVET Reform Project in Bangladesh

In cooperation with the Government of Bangladesh, the ILO is implementing an EU funded project to reduce poverty through reforms to the TVET system. These reforms enable more people to acquire employable skills and thus generate income through wage-earning jobs or self-employment. The activities for this TVET reform project, the first of its nature in Bangladesh, have been carried out adopting five components dealing with specified major issues of TVET focusing on Bangladeshi context.

The project's goal is to ensure Bangladesh's competitiveness in the global market and reduce poverty by improving the quality of vocational educational and training.

The TVET Reform Project has five key target areas which together ensure a TVET system which is coordinated, flexible, responsive and able to meet industry needs.

- Component 1: Policies, systems and legislation reviewed and strengthened
- Component 2: Relevance and quality ensured
- Component 3: Strengthened institutions through improved knowledge and skills of managers and teachers
- Component 4: Linkages between public and private organizations resulting in enhanced productivity, competitiveness and relevance to industry
- Component 5: Increased access for underprivileged groups

As Components 3 and 4 are directly relevant to teacher training systems, these are further elaborated below.

Component 3: Strengthened institutions through improved knowledge and skills of managers and teachers

The major focus for Component 3 is capacity building for managers and instructors in TVET institutions. Public TVET management systems and funding mechanisms was reviewed and strategies proposed to support development of a flexible, demand driven training system. Contemporary training programmes for TVET managers and teachers were developed. Private TVET institutions were also included in all development initiatives resulting in an improved TVET training provision across Bangladesh.

To address the pressing issue of instructor quality the TVET instructor training system was reviewed and a new system proposed for entry level training as well as the technical skills updating of instructors.

In order to meet labour demands in Bangladesh, technical and vocational training and assessment must be flexible, high quality and relevant to changing market situations. The TVET Reform Project, through improving the responsiveness and flexibility of TVET institutions, enable training institutions to better meet industry needs. This can be done in a number of ways; through introducing a TVET quality-assurance system, through reviewing qualifications and curricula and through creating additional qualifications to ensure that all courses are demand-driven and competence-based.

The industry benefits from higher skilled workers and students benefit from quality skills development which in return increases employment opportunities.

Component 4: Linkages between public and private organizations resulting in enhanced productivity, competitiveness and relevance to industry

Component 4, which is responsible for "Workplace Learning and Productivity", aims at improved skills development and results in enhanced productivity and competitiveness in key growth and export-oriented industries in the formal industrial sectors. In the first phase of the TVET Reform Project the component mainly pursued four result areas:

1. Employers' demand for higher skills raised
2. Improved linkages between TVET and enterprises
3. Modern work practices introduced
4. Learning at work supported

The TVET Reform Project aims to enhance productivity and improve competitiveness by bridging the current gap in Bangladesh between the supply of skilled workers and the increasing needs of the labour market. Enhanced productivity and competiveness relies on the strength of the relationships between TVET institutions and employers, which enable high quality, practical skill development and workplace learning. To develop and support these relationships, the key objectives of the Component 4 team have been as follows:

- Improve skills development resulting in enhanced productivity and competitiveness in key growth and export-oriented industries in the formal industrial sector
- Improve linkages between TVET and enterprises
- Introduce of modern work practices
- Support learning at work
- Apprenticeship system improved and strengthened

Source: ILO, 2010d.

Annex 9: Examples of social dialogue given at the Global Dialogue Forum on Vocational Education and Training (29–30 Sep, 2010)

Argentina

Tripartite sectoral councils at provincial level decide on skills curricula, standards and certification in line with industry needs and public financing of key sectors. Training centres at provincial level are better able to respond to changing needs, including the use of resources. In this context, social dialogue was effective in setting the orientations and content of training, particularly in promoting the mobility of workers in a regional framework such as MERCOSUR. The results of the ILO's Global Dialogue Forum on Strategies for Sectoral Training and Employment Security held in March 2010 provided important guidance on certain policies.

Burkina Faso

In Burkina Faso social dialogue and knowledge-sharing between stakeholders occurs in several institutions, notably: a national council on employment and vocational training comprised of government, employer and worker representatives, NGOs and associations involved with employment and vocational training, responsible for implementing national employment or TVET policy; and a national committee on training programme certification, which ensured TVET certificates of completion.

Cameroon

National bodies such as the labour advisory committee and the national committee on apprenticeships, training and vocational qualifications along with regular consultations in the form of conferences between government, workers and employers constituted the dialogue mechanisms on TVET matters.

Canada (Quebec)

A tripartite commission involving representatives of unions, employers and ministries met on a regular basis to advise on the development and recognition of workforce skills, and especially on training of employed workers, with special attention to the effects of the economic recession. Informal social dialogue covered literacy and language issues of immigrants and second-chance education opportunities; this informal dialogue should be extended to more formal mechanisms.

Kenya

Public-private partnerships derived from social dialogue proved effective in Kenya in augmenting TVET provision.

Kiribati

Tripartism has been strongly encouraged by the Government despite the small size of the country's private sector. Through dialogue at regional level, partnerships to develop TVET programmes in specific occupations had been established with the EU, Australia and New Zealand and a regional training institution set up in Fiji for all Pacific island countries that provided certified training at the level of Australian qualification standards. Social dialogue should be extended beyond national borders.

Mauritius

Within Mauritius, social dialogue in the realm of TVET based on consensual decision-making took place among government, private sector and trade union representatives in a number of bodies, including: a human resources council responsible

for identifying training needs and managing the national training fund; a national qualifications body responsible for the development of national TVET qualifications; a national apprenticeship committee; and the recently established National Empowerment Foundation with the objective of alleviating poverty and unemployment through training and placement programmes.

New Zealand

Industry training bodies regulated and funded by the Government, engaged employers and workers in decisions on training policy and provision, including standards. In Africa, as a UNESCO study tended to show, private institutions led the way on TVET provision, which demonstrated the need for greater social dialogue within such institutions. Governments could assist the process by providing more incentives.

Nigeria

Examples of social dialogue in Nigeria include an industrial development fund with boards established at the state and federal levels, national bodies engaged in setting standards for trainees and in teacher councils and national qualification frameworks.

Paraguay

Round tables involving young workers have served as a means by which social dialogue could promote training and employment policies that met national needs.

The Philippines

Social dialogue was used strategically to arrive at effective and coherent TVET policies and programmes, including wise use of resources. The highest policy-making body in education and training had a majority of private sector representatives, drawn from employers, trade unions and TVET institutions. Multi-sectoral TVET skills and development committees were mandated by law at regional, provincial, district and local levels to coordinate delivery of efficient, relevant and high-quality skills development programmes by public and private providers. The Government also prepared labour market intelligence reports as a basis for skills policy and programmes in close cooperation with the social partners. Social partners were also associated with management and evaluation of community-based training programmes, a training centre for women and another one for advanced technology.

Sweden

Sweden has a long tradition of utilizing social dialogue to solve workplace problems, dating back to the 1930s, when the first collective agreements were successfully reached between employers and trade unions. This tradition of talking to each other meant that many TVET issues were even dealt with outside collective agreements. Nevertheless, as recent events demonstrated, governments could ignore the views of social partners if it suited their political purposes.

Source: ILO, 2011b.

Annex 10: Social dialogue mechanisms for TVET and skills development in OECD member countries

Australia

The Industry Skills Councils (ISCs) are privately registered companies run by industry-based boards of directors, but with funding provided substantially by the Australian Government. Their tasks include: provision of industry intelligence and advice to Skills Australia (an independent body providing advice to the Government on current and future skills needs), government and enterprises on workforce development and skills needs; actively supporting the development of training packages; provision of independent skills and training advice to enterprises; and working with enterprises, employment service providers, training providers and Government to allocate training places.

Denmark

The Advisory Council for Initial Vocational Education and Training (REU) has advisory status with the Minister of Education at national level. It is comprised of members from the social partners, school leader and teacher associations, as well as members appointed by the Ministry of Education. The Council advises on the overall structure of the system and monitors existing programmes and labour market trends, as well as makes recommendations on the establishment of TVET qualifications. In addition, sectoral trade committees and local trade committees at sectoral and local levels can decide on many elements of vocational education and training within the overall structure.

Hungary

Since 2008 (subject to any decisions by a recent change of Government), regional development and training committees (more than half of whose members are drawn from the social partners) have decision-making powers over the number of students admitted to different programmes and over the qualifications to be delivered in the region subject to agreed national guidelines.

Netherlands

Regional vocational education and training centres in the Netherlands (ROC) have representatives of (regional level) social partners in their supervisory board. ROCs supply all the vocational training schemes financed by the Government at secondary level and provide adult education for a region.

Switzerland

Partnership arrangements between the Confederation, the cantons and the social partners are established by law and are a pillar of the TVET system. Employers and trade unions have a direct role in TVET policy-making with partners having their own area of responsibility. All major decisions are discussed and taken jointly and all three partners are represented at national, cantonal and local level.

United Kingdom

The UK Commission for Employment and Skills (UKCES) is an employer-led body that also has members drawn from the trade unions and local government. It advises the Government on strategy, targets and policies, monitors the TVET system, including the performance of the Sector Skills Councils, which it licenses.

United States

The "Partnership for 21st Century Skills" was formed in 2002 at the initiative of the federal Government, major US-based corporations and teachers' organizations, has since expanded considerably its private sector membership, advocates and has developed a policy framework on skills' curricula, assessment, instruction, professional development of teachers and improvements in the learning environment.

Source: OECD-CERI, 2009a: 37, 42, 100–102; Partnership for 21st Century Skills (P21), 2010.

Annex 11: Examples of global, regional and local knowledge-sharing networks

Global networks

UNESCO-UNEVOC

www.unevoc.unesco.org

The International Centre for Technical and Vocational Education and Training (UNEVOC) was established in 1999 by UNESCO and is headquartered in Bonn, Germany. UNEVOC currently has 283 centres in 167 countries/territories worldwide, though not all centres are active. The UNEVOC network hosts an active online community and e-forum which fosters communication, creativity, and consensus among its 1750 members. The UNEVOC website also includes TVETipedia, an online portal which allows users to define and provide background information on terminology and institutions associated with TVET. Online conferences such as those hosted annually by UNEVOC offer a valuable forum for professional development and knowledge-sharing.

An e-Forum survey conducted in 2010 evaluated the impact and value of the network among users. Respondents came from a variety of disciplines including practitioners, researchers, policy-makers, development workers, and students. Over 85 per cent answered that the e-Forum is relevant or very relevant to their work. Responding to how they have used the information from the e-Forum, 65 per cent said that they have applied the information to a training project or programme, 29 per cent said that they have cooperated with someone they got to know via the e-Forum, and 26 per cent said other, citing uses such as benchmark assessments, research, awareness about current debates and innovations in TVET, and comparison of country and regional practices (UNESCO-UNEVOC).

International Vocational Education and Training Association

www.iveta.org

The International Vocational Education and Training Association (IVETA) was established in 1985 as a network to connect the international vocational community. Members include practitioners, researchers, and students engaged in the field of vocational education and training from over 50 countries as well as institutions, organizations, and companies working in human resource development. Through developing professional linkages, IVETA seeks to develop a new era in communication among vocational educators around the globe.

Dedicated to the promotion of high-quality vocational education and training, IVETA offers a variety of professional resources for its members. IVETA produces a semi-annual journal on innovations and best practices in TVET, a quarterly organizational newsletter, and a monthly electronic 'hotline' with key events and announcements for members. In addition to these electronic resources, the IVETA website offers an online discussion forum, membership directory, and job bank. IVETA regularly hosts regional and international conferences including an annual conference held in December in the US, providing opportunities for knowledge-sharing among practitioners. Furthermore, IVETA supports the work of its members through two programmes: the Professional Micro Grant Programme which provides financial support of up to US$2000 for members from

developing countries to implement new approaches in TVET, and the IVETA Award Programme which recognizes individuals and organizations for their valuable contributions to the development of vocational education and training.

Global Knowledge-Sharing Platform

As part of the implementation of the G20 Training Strategy: A skilled workforce for strong, sustainable and balanced growth, the ILO has launched a web-based Global Public-Private Knowledge-Sharing Platform on Skills for Employment (Global KSP). The Global KSP is aimed at turning information into actionable knowledge with a focus on pragmatic problem-solving through analysis of what governments, workers and employers, as well as other organizations, have found that works; facilitating active exchange of experience among constituents and stakeholders; collecting and disseminating case studies and other knowledge products directly from enterprises and from trade unions; broadening the range of experience made available to ILO constituents through partnerships with other international organizations under the G20 partnership; and maximizing open, public access by choosing platform technologies that maximize accessibility in less industrialized countries.

Regional networks

Africa:

Association for the Development of Education in Africa (ADEA)

http://www.adeanet.org/adeaPortal/

Though the development of regional practitioner networks in Africa is weak, the **Association for the Development of Education in Africa (ADEA)** does include TVET in its educational analysis. The ADEA's Triennale Meetings are organized to facilitate discussions among African ministers of education, development agencies, and other education professionals. The theme of the 2011 Triennial was "Promoting critical knowledge, skills and qualifications for sustainable development in Africa: how to design and implement an effective response by education and training systems?" which offered a forum for discussion and exchange on ways to strengthen TVET in Africa.

Arab States:

TVET Portal

www.tvet-portal.net

Developed in 2010, the TVET Portal is a communication platform for professionals and institutions working in TVET in Arab countries to exchange information and transfer knowledge, thereby developing a lively community of practice in TVET and e-learning in the region. The platform is also meant as a building block for a regional network of TVET institutions and individuals to strengthen the cooperation among Arab States. Since its

implementation last year, it now has over 1000 members from the region in its online community.

The TVET Portal offers three areas for knowledge-sharing and professional development: the TVET Portal which serves as a resource base for updated information about TVET and e-learning, the TVET Forum which facilitates the exchanges of information and experiences among TVET practitioners in Arab states, and the TVET e-Learning which provides online learning courses in TVET subject areas. All areas of the TVET Portal are available in both Arabic and English.

Americas:

Inter-American Centre for Knowledge Development in Vocational Training (CINTERFOR)
http://www.ilo.org/public/english/region/ampro/cinterfor/

The Inter-American Centre for Knowledge Development in Vocational Education (CINTERFOR) was established by the ILO in 1963 and is headquartered in Montevideo, Uruguay. Covering over 60 organizations in Latin America and Spain, its three priority areas are promotion of vocational training as a tool to social inclusion, institutional development of training, and social dialogue in vocational training.

CINTERFOR facilitates knowledge-sharing for its online community which currently has over 1000 users and 20 topical learning groups. Resources that contribute to this goal include a teaching and training resources bank, experience and good practices database, labour competences bank, specialists database, topical publications, and the CINTERFOR virtual space which supports online learning communities and distance training.

Asia and Pacific:

Asia-Pacific Skills and Employability Network

http://apskills.ilo.org/

Launched in 2011, the ILO-sponsored Asia-Pacific Skills and Employability Network sets the stage for constituents, experts, practitioners, academia and others to interact, exchange and share resources, experiences, expertise and ideas. It is the collective aim of all members to optimize human resource development processes towards improving the skills and well-being of women, men, youth and persons with disabilities across the Asia-Pacific region.

The main purposes of the Skills and Employability Network are to deliver quality results on skills development; provide easy access to recent knowledge products, expertise, services and tools; provide a forum for discussion and dialogue; identify and understand the needs of constituents and stakeholders; and connect those working in TVET and their experiences. The network is quickly growing and offers a variety of resources to its members including a bi-monthly newsletter highlighting TVET developments and events within the Asia-Pacific region.

Europe:

European Forum of Technical and Vocational Education and Training (EFVET)

http://www.efvet.org/

The European Forum of Technical and Vocational Education and Training (EFVET) is a unique European-wide professional association which has been created by and for providers of TVET in all European countries. While EFVET is engaged at a political level by representing its members and contributing on their behalf to the policy debate within the European Commission, it also plays a key role in providing its members with the opportunity to share good practice, explore new and innovative teaching and learning methodologies, develop partnerships across Europe and learn from each other. Currently EFVET is in the process of establishing a number of working groups on different thematic topics to encourage participation and knowledge-sharing in key areas.

While there are a wealth of entities dedicated to teacher training and coordination, there are few networks at the regional level to facilitate interaction and knowledge-sharing among practitioners themselves. As the success of an established network such as CINTERFOR in Latin America and a newer network such as TVET Portal in the Arab States illustrates, there is on-going interest in regional knowledge-sharing among practitioners. These networks could provide useful examples for replication in other regions, particularly Africa and Asia-Pacific.

National networks

Australian Training Awards (Australia)

http://www.deewr.gov.au/Skills/Awards/ATA/Pages/default.aspx

The Australian Training Awards are the peak, national awards for the vocational education and training sector, recognising and rewarding organizations and individuals for their outstanding contribution to skilling Australia. The Australian Training Awards are the culmination of the state and territory training awards with winners from each state and territory eligible to compete at the national finals. The 2011 Australian Training Awards included:

- Categories for individuals
  - Australian School-based Apprentice of the Year Award
  - Vocational Student of the Year Award
  - Aboriginal and Torres Strait Islander Student of the Year Award
  - Australian Apprentice (Trainee) of the Year Award
  - Australian Apprentice of the Year Award
  - VET Teacher/Trainer of the Year Award
  - Lifetime Achievement Award
- Categories for organizations
  - Small Employer of the Year Award
  - Employer of the Year Award

- Small Training Provider of the Year Award
- Large Training Provider of the Year Award
- Industry Collaboration Award

Local networks

Vocational Teachers' Association of Manitoba (VTAM) (Canada)

www.vtam.org

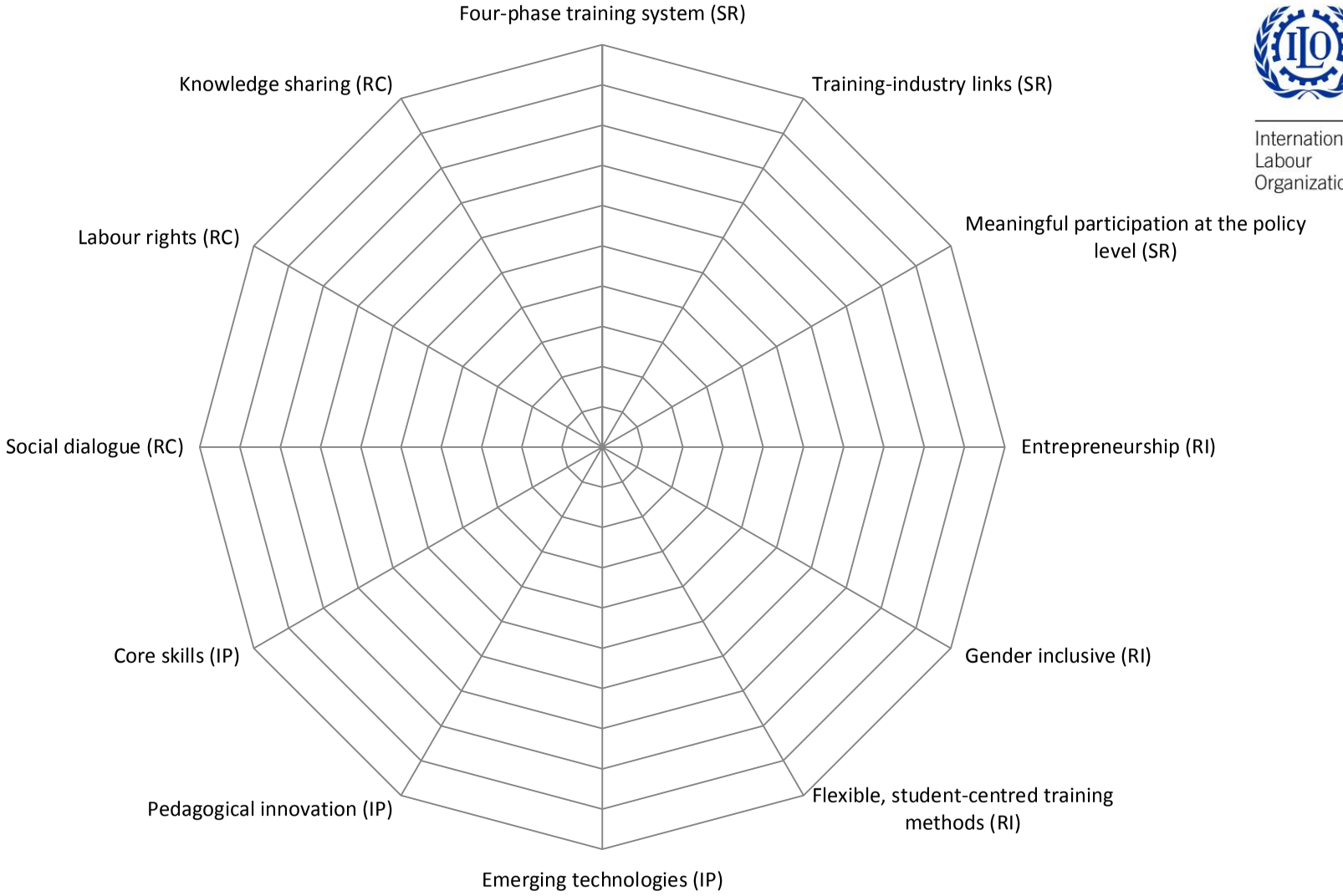
Not long ago, vocational teachers were not recognized as specialized professionals in the Manitoba school system.

Despite their longer and more rigorous entry requirements, vocational teachers began their teaching careers one classification lower on the salary scale and were paid less than their peers in general education. If they did want to advance within the education system, they were required to complete twice as many credit hours of university coursework to obtain their Class 7 than was required of their teaching colleagues. They did not enjoy the benefits of belonging to a Special Area Group (SAG) and did not have a unified "voice" to advocate for their specialized learning and workplace credentials. Thanks to the work of VTAM, now that has changed.

The VTAM continues to work hard to promote the professionalism of its members, the rights of each vocational teacher in the province, and the mutual benefits of technical vocational education for our students and society.

The VTAM regularly holds conferences and topical trainings for its members. It offers professional development and to encourage young professionals, membership in VTAM is free to those in their first year of the Technical Vocational Teacher Education programme.

Annex 12: Twelve key elements of teacher training self-diagnostic tool



Key (four pillars): SR = structure & relevance; RI = responsiveness & inclusion; IP = innovation & progress; RC = representation & communication

Employment Working Papers

The Working Papers from 2008 are available at:

www.ilo.org/employment/Whatwedo/Publications/working-papers

Please scan the code

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