

APRIL 07

Technical and vocational skills development

SUMMARY

Technical and vocational skills development (TVSD)¹ is moving up the agenda of governments and of donor agencies in sub-Saharan Africa (SSA) and South Asia. It has been particularly influenced by evidence of its key transformative role in East Asia, in Latin America and the transition countries of Central Asia and Eastern Europe. It is widely perceived to be relevant to debates about productivity and competitiveness, as well providing a work-related option in the expansion of post-primary schooling. In countries with a clear and long-standing policy commitment to TVSD, the provision of skills is in a much stronger situation than countries whose policies have been substantially influenced by shifts in donor policies and priorities.

BACKGROUND

The rise, fall, and rise again of technical and vocational skills development (TVSD)

During the 1960s and early 1970s, technical and vocational skills development (TVSD) was a key sub-sector for many bilateral and multilateral donors in their support to developing nations. For national partner governments, also, it was a very natural component of modernisation strategies through vocationalised or diversified secondary schools, and often through International Labour Organisation (ILO) supported national industrial and vocational training centres. Initiatives that had the objective of providing employable skills to ease school-leaver unemployment became popular in many countries in SSA (e.g. Workers Brigades in Ghana, Village Polytechnics in Kenya, Botswana's Brigades, and Tanzania's Education for Self-Reliance). **During the 1970s**, however, a critique of modernisation and of the formal sector led to a change in thinking. Non-formal education and training were recognised by several leading donors as alternatives to formal education, as was the scale of skills development in the urban and rural informal sectors.

The 1980s saw structural adjustment and cost-sharing measures deeply affecting public provision of education and training, while rate-of-return studies appeared to weaken the case for external support for post-primary. Countries which

¹ See glossary for discussion of main terms used.

vocationalised their formal education systems in the mid-1980s had to go it alone, without donor aid. Nonetheless, while agency policy became critical of vocationalised secondary education from the mid 1980s, it remained popular for many national governments. In other words, shifts in donor policy had a much greater effect on sub-Saharan Africa, with its relative dependence on external financing, than on other regions (King and Palmer, 2006). TVSD has remained politically attractive in many developing and developed countries on account of its assumed close link with the world of employment and work. Yet, both politicians and policy makers frequently have expectations of TVSD that are very much greater than those they have for general education, despite budget allocations for TVSD being dramatically smaller than for general education. This underlying assumption of the TVSD agenda continues to be a powerful influence on TVSD policy-making in developing countries (King and Palmer 2006; Palmer, 2006).

The World Conference on Education for All in 1990 brought universal primary education (UPE) back on to the international agenda. This was adopted as an International Development Target in 1996 and as a Millennium Development Goal (MDG) from 2000. TVSD was excluded from both the IDTs and the MDGs. Many donors, including DFID, made the MDGs central to their development priorities. The World Bank's path-breaking policy study on vocational and technical education in 1991 appeared to challenge this trend; but it was widely interpreted as discouraging public provision of TVSD, and as supporting good basic education as a foundation for post-school skills, instead of school-based TVSD.

TVSD is back on the international agenda². In the mid 2000s, the [Commission for Africa](#), the [Millennium Project](#) & Summit, new World Bank policies on [secondary, higher & general education](#), and on [skills development](#), as well as the [World Development Report of 2007](#) on youth, have all argued that a holistic, integrated, inter-sectoral approach to education is crucial, including TVSD. DFID's 2006 briefing on '[secondary, vocational and higher education](#)' makes the same point. Sector-wide approaches (SWAPs) from the mid-nineties exemplified these new priorities of supporting the whole education sector. Increasingly, the Poverty Reduction Strategy Papers (PRSPs) will need to reflect this same comprehensive approach. While there is a recognised general absence of skills development in PRSPs (Caillods, 2003; ILO, 2005), the World Bank notes that many governments in SSA have put policies in place that emphasise training for the informal sector (World Bank, 2004).

The narrow if quantitatively successful focus of the 1990s on primary education has produced enormous pressures on the still small secondary and vocational systems of many countries. Hence there is significant interest in TVSD among governments in Africa and S. Asia, as they consider what happens after primary education. But apart from the sheer numbers, the quality of these new generations of aspirants for post-primary education is causing very grave concern.

The political and policy communities in many developing countries remain attracted by the assumed link between TVSD and a reduction in unemployment, through acquiring work-skills. For example, the background document for the African Union's TVET Experts' meeting (13-14 December 2006 in Addis Ababa), the 'Strategy to

² These shifts in the global agenda for TVSD have had much more impact in SSA and parts of South Asia than in countries such as China, Malaysia, Singapore, and South Korea.

Revitalize Technical and Vocational Education and Training (TVET) in Africa', comments that:

One of the most important features of TVET is its orientation towards the world of work and the emphasis of the curriculum on the acquisition of employable skills. TVET delivery systems are therefore well placed to train the skilled and entrepreneurial workforce that Africa needs to create wealth and emerge out of poverty. (Afeti, 2006: 4)

However, the demand for TVSD from these policy and political communities is not always matched by a demand for TVSD from parents and the youth. General secondary schooling still remains preferable for many and is often seen as more 'vocational' than vocational education and training proper (Foster, 1965). This is because general academic schooling is regarded by many as being a better preparation for the available formal employment opportunities. In countries with either a general lack of jobs for TVSD graduates and/or inadequate support for micro- and small-enterprise (MSE) start up, TVSD is likely to remain less popular than general schooling. In countries like South Korea, China and Mozambique, where formal job growth has been sustained in recent years through both national and foreign direct investment, and where there has been policy commitment to quality work skills, demand for TVET has been strong (Adams, 2006).

There are few lessons to guide investment in what is loosely termed 'education and skills for the knowledge economy' but globalisation continues to have a major influence on the need for flexible work skills. More of the same secondary education and skills training, of indifferent quality, will not do. Arguably, the many benefits claimed for TVSD, such as higher productivity, readiness for technological change, openness to new forms of work organisation, and the capacity to attract foreign direct investment, all depend on the quality of the skills acquired, and a dynamic environment in which they can be applied.

Technical and vocational skills development in differing macro-economic environments

The utilisation and allocation of skills in a dynamic, expanding economy are fundamentally different from macroeconomic situations in which there is no growth, and poor governance. In South Korea and China, there has been employment for TVSD graduates of almost all institutions; while in a stagnant economy like Sri Lanka, there may only be jobs for some of the very best students. Clearly, the economy counts.

It is not just a question of getting the economy right and the skilled opportunities will follow; evidence from South Korea and Hong Kong suggests that in a developmental State, future skills can be successfully planned for, even before there is a demand. This is very different from the political conviction that mere exposure to skills training can actually create jobs, regardless of the surrounding investment environment. This latter reasoning lies behind a whole series of short-term, youth training schemes, from Pakistan, to Philippines and from India to Ghana.

WHAT WE KNOW AND DON'T KNOW ABOUT TVSD PROVISION

Arguments for and against TVSD in its different modalities

Unlike general secondary school, there are many more locations and modalities for the delivery of TVSD. These need to be seen in the context of their macroeconomic environment and the distinct cultures of skills that have been nurtured in specific contexts. A pick-and-mix approach to skills borrowing from Germany, Korea, Brazil or China won't easily work.

The advantages and disadvantages of public school-based technical education; public vocational training centres; and training in the informal/unregistered sector are discussed in detail. More emphasis is given to these three modalities, as they may particularly be where Ministries of Education and Labour are seeking policy advice. Briefer comments are made on the two forms of non-state training provision; on enterprise-based training; and on agricultural education and training.

These modalities are not separate 'silos'; many young people combine several of them in pursuing their pathways to work. Indeed, the well-known German 'Dual System' combines training in the enterprise for the apprentice with attachment to a vocational school.

Selected sources for further consultation are provided by topic at the end of the text along with a glossary.

1. The vocationalisation of junior and senior secondary education and other forms of publicly-funded school-based technical education

In support of school-based TVSD:

- TVSD provides pre-employment orientation to 'employable skills'; vocational and technical education is very widespread in all OECD countries.
- Vocational subjects are desirable on general education grounds, as part of a well-rounded education.
- Some of these vocational subjects, e.g. commerce, computing, accounting, business studies, entrepreneurship, are no more costly than the regular academic curriculum; this light orientation to TVSD is very different from the strong orientation, in full technical and vocational schools; arguably, the former also has good links to the knowledge economy.
- There is evidence that even the weak vocational orientation is still appreciated by students, and does affect their aspirations for different kinds of future work.
- Technical education can be more intensive, when located in separate technical secondary schools. It is in these latter schools that the costs are much higher, but the exposure to technical expertise can be much more complete, as in S. Korea and Taiwan.
- In many countries, including much of the former Soviet Union, students from poorer families were able to benefit from the social and labour market benefits of this kind of widely distributed school-based technical education.

- In OECD countries especially, there have been numerous attempts to change the ‘dead-end’ image of TVSD through increasing the general education content of separate technical schools, and creating flexible pathways to further education and training. China’s higher vocational colleges are an illustration of these pathways.

Challenges to school-based TVSD:

- In its more intensive, specialised modality, TVSD can be many times more expensive than general education.
- The labour market effectiveness of diversified secondary schooling has been questioned by the World Bank for over twenty years in Africa and Latin America, and more recently in India, though it was supported by the Bank for the previous twenty years.
- Allowing for methodological concerns with rate-of-return studies, the returns to general education appear higher than diversified education.
- Although TVSD is held by politicians to encourage self-employment, there is little firm evidence of this.
- Enrolment in some types of vocational course is often strongly gender-biased.
- Vocational courses are naturally concerned with getting qualifications, and hence can become skewed towards theory-based learning at the expense of practical training.
- Foster’s ‘vocational school fallacy’ argued that vocational curriculum change couldn’t fix unemployment; this was an economic not an educational problem.
- Attempts to reduce the academic-vocational divide may end up weakening the special culture and appeal of vocational education, though this has not happened in parts of Europe.
- Too often, and especially in highly divided societies, policy proposals for skills training are for other people’s children, and particularly for the poor.

Comment

Discussions of vocationalisation often confuse a light orientation towards vocational subjects, with technical education as an entirely separate stream of secondary education, as in much of Latin America, Francophone Africa, Europe and many parts of East and S. East Asia. These are two very different modalities, with different costs, philosophies and cultures. However, with all varieties of school-based technical or vocational education, the transition of graduates to the labour market is going to be much easier when economies are growing, and job growth is sustained as in South Korea, China and Mozambique. Deliberate mixes of light and intensive orientation might be a good policy response to a political demand for wholesale vocationalisation.

2. Publicly-provided vocational training centres & industrial training institutes

In support of public vocational training centres (VTCs) and institutes:

- These provide pre-employment training in ‘employable skills’ in institutions that are traditionally not felt by trainees to be part of a culture of progression to higher academic education. They are usually under Ministries of Labour or under independent training authorities, e.g. in Singapore, Jordan, the Philippines.

- In much of Latin America, VTCs have been supported by a training levy on industry; they have been relatively independent of government, close to industry, and they have maintained good quality provision. Indeed, several of these national training systems, e.g. Brazil, Colombia, Singapore, have attained international reputations.
- They provide qualifications that are recognised by industry and commerce; these are increasingly being incorporated in wider occupational standards, and can be competency-based and demand-driven.
- They are effective in many countries precisely because they are not seen as a substitute for secondary education, or as a way of reconnecting with higher education. One disadvantage of the plans to reduce the academic-vocational divide, through unified systems is that trainees (and employers) may increasingly regard vocational training as another, less prestigious version of secondary school.

Challenges to vocational training centres (VTCs) and institutes:

- Vocational training centres, in countries with weak institutional links to industry, are seen to supply graduates with courses that are not demanded by industry.
- In such weak institutional environments, the introduction of national qualifications frameworks will be largely ineffective.
- Where institutions have little incentive for performance or little pressure to make their courses responsive to the market, the curriculum remains traditional and supply-driven.
- Lacking financial independence or central government support, the equipment can and does become obsolete, and the instructors become out of date; in many countries, the VTC system receives a minute proportion of the recurrent budget, and is obliged to introduce cost-sharing measures. The result can mean that VTCs emphasise theory rather than practical skills.
- Though historically subsidised, VTCs are not necessarily physically or financially accessible to youth from poor families.
- Public vocational training centres and institutes are notoriously poor at relating their provision to the training needs of the informal or unregistered sector. Even the Latin American VET systems have found it very difficult to offer cost-effective, relevant training for the continent's large informal sectors.
- When public VET provision is of low quality, formal apprenticeship and dual-system training schemes (which require access both to public VTCs and to training in the enterprise) do not secure the support of the private sector.
- VTCs have frequently been the location of very short term, politically motivated schemes to provide skills for unemployed youth. These have generally lacked any post-training support, and have proved to be ineffective and unsustainable.

Comment

Public VET systems are a reflection of industry's historical traditions of training, and of a division of labour between the State and the private sector. Where the private sector has a strong commitment to training, public VET systems have played a crucial role in off-the-job training. Where employers have long preferred to acquire trainees through systems of selecting from unskilled and even casual labour (as in South Asia), formal VET provision has been widely seen as irrelevant to industry. As with school-based technical education, VET systems are much more in demand

when economies are growing, and there are enabling industry and technology policies. VET reform, therefore, is not just about VET institutions, but about the economy, and systems of accountability and responsiveness.

3. Traditional apprenticeship training & training in the informal sector

These are hugely varied. Some countries in West Africa generate considerable regulation from within apprenticeship systems while in many other countries, training in the informal sector can be very much less regulated or organised. Nor is all training in the informal sector in the apprenticeship mode.

In support of traditional apprenticeship training:

- Skills training in these systems is highly relevant to the real world of work. Youth become acquainted with actual work conditions and with the maintenance or production of tradable goods through appropriate technologies; this can result in employment in the same enterprise; and there is certainly some evidence of substantial changes in technology over a 20 year period.
- Even though skills training, by itself, is not sufficient to raise incomes in the informal sector, it can, along with other inputs, contribute to enhancing the productivity of the sector.
- Such systems are often more effective than the pre-employment training, as trainees are more mature and motivated than in formal pre-employment training; trainees can also enter without the formal qualifications needed for public VTCs.
- Training allows for a gradual build-up of informal business networks and for the development of general business skills, including customer-relations.
- These modes of training are of lower cost than VTCs and are financed directly by the beneficiaries. They are accessible to rural populations and the urban poor.
- They are **the** majority source of TVSD in Africa, South Asia and even Latin America, and they are emerging in importance in countries in Central Asia; this is because the informal or unregistered sector is responsible for between 80% and 90% of employment in much of SSA and South Asia, and for over 50% of employment in Latin America.

Challenges to traditional apprenticeship training or training in the informal sector:

- The potential benefits of increased productivity and income are dependent on a range of additional inputs, such as credit, market access, security of tenure and business counselling. These tend not to be available since no ministry takes overall responsibility for the informal sector; nor is the formal banking system interested.
- These indigenous systems are frequently static; the introduction of new product designs and production technologies are excluded; traditional technologies are perpetuated except in dynamic industrial environments.
- There is no link with formal training systems. Hence there is no exposure to theoretical aspects or to more modern training approaches; master craftsmen and women often lack teaching skills.
- The few initiatives that have sought to formalise aspects of the informal sector have not proved either effective or sustainable.

- There is a great variety in the quality of both training and working conditions, with some close to exploitative; there is a lack of clear standards, monitoring and quality assurance.
- Portability of skills is limited, as there is often no accepted certification.
- There is still screening out of applicants from poorer families if up-front payment is required; and much apprenticeship is gender-biased.
- There is more evidence of the informalisation of the formal sector than the formalisation of the informal sector; in other words, many formal sector employees are routinely now obliged to have a second job in the informal sector, in order to survive.

Comment

The informal sector and the local apprenticeship system present a development paradox: they are crucially important to employment generation and to the transfer of skills across generations. Yet, government response has generally been more negative than positive. The few schemes to formalise the informal sector have not been effective. The most positive government influence on the informal sector and traditional apprenticeship thus far has been indirect, through popular access to primary and junior secondary education, and hence more educated trainees have entered the sector. A possible policy reaction to the new demands for the formalisation of the sector would be seriously to review the wider legal, credit and macroeconomic environment of the sector and the most appropriate ministerial responsibility for it.

4. Summary issues relating to private non-profit provision of skills

In support of NGO and community-based projects:

- These programmes often target those not reached by the public or private-for-profit training providers (e.g. the poor in urban slums or rural areas; refugees; people living with HIV/AIDS; those with special needs).
- They often provide integrated skills packages with post-training support and sometimes access to credit.
- They are useful to test out new approaches. These are valuable even if they usually cannot be scaled up.
- Because of the unique commitment of many trainers and managers of NGO training centres, trainees can acquire social capital beyond the technical or vocational skills. Formal sector employers find this attractive.

Challenges of enhancing donor-funded, NGO and community projects:

- There are obstacles to sustainability and to scaling up small, successful NGO projects precisely because the chemistry of staff leadership and staff commitment is so hard to generalise.

5. Summary Issues relating to private-for-profit provision

For enhancing private-for-profit providers:

- Government does not pay, and so private training may reduce pressure on public spending for skills development.

- At the top end, the quality of private provision tends to be better than public provision, particularly in for-profit providers who are essentially selling a service (secretarial/business, languages, commerce, and computer training) and who would go out of business if the market considered their service inferior.

Challenges of enhancing private-for-profit providers:

- Heavy reliance on private provision would further marginalise the poor, in rural and urban areas, who will not be able to afford the fees.
- The sheer range of private provision, from internationally known brand names to back-street 'colleges', is seldom sufficiently known to become part of career orientation for young people.
- The quality of private provision is extremely variable, and in many countries there are large numbers of unregistered and unregulated centres of very doubtful quality.

Comment

There has been inadequate analytical work carried out on the multiple forms of private provision. It may well be the case that the poor are availing themselves of very low cost private TVSD as they do for schools. Wider certification, quality assurance and standardisation of private provision are an obvious policy response, but these constitute a huge challenge in countries where even the inspection of the public sector provision is very fragile.

6. Summary issues relating to enterprise-based (or on-the job) training, in the formal sector of the economy

For encouraging formal enterprise-based training (EBT):

- Targeted EBT has been crucial to raising the skills of the workforce along with phased industrialisation (e.g. in Japan, S. Korea and in Singapore).
- It has also been shown to raise the productivity of the workforce in manufacturing firms in several countries in SSA.
- The companies pay for the training, and can, in some situations, be stimulated to do more through levy-grant schemes.
- There is widespread evidence of firms' readiness to invest in training, especially in East Asia and sub-Saharan Africa.

Challenges of supporting formal enterprise-based training:

- It is usually the better educated employees that benefit from this form of training.
- Larger firms, including those with foreign investment, are more likely to train.
- There is a much lower propensity for medium and small firms to train in the Middle East, N. Africa and S. Asia; overall in India, for example, only 7% of employees receive training in a given year.

7. Skills development for agriculture/ agricultural education and training (AET)

In support of skills development for agriculture/ AET:

- Technical and professional education at the tertiary level has an important role to play in strengthening institutional capacities in the agricultural sector.
- AET enables rural producers to realise higher returns on their labour and investments and is achieved: i) directly through farmer training; and ii) indirectly by educating extension staff, by developing researchers, or by building the technical capacities of producer organisations and input suppliers. Different levels and types of AET are therefore required.
- Agricultural extension services are the main source of technical information and skills development for farmers.

Challenges of supporting skills development for agriculture/ AET:

- There is often a weak link between skills supplied in AET and those demanded in the agricultural sector.
- In the absence of other supportive inputs (credit, transport and marketing infrastructure, pesticides/fertilisers, secure land tenure etc) skills learnt in AET can remain un- or under-utilised.

Comment

Very large and increasing numbers of workers straddle farm and non-farm work; hence the policy response to the informal sector should be borne in mind in considering a response to AET. Also of note is the targeted skills training for migrants from rural farming areas in China.

OTHER CROSS-CUTTING, AND WIDER ISSUES

Skills and Qualification Frameworks

The widespread increase in interest in National Qualifications Frameworks (NQFs) is intended to provide links between informal/non-formal education and training systems on the one hand and the more formal education and training system on the other. NQFs are meant to provide a framework within which all education and training is both recognised and can be used for progression to further education/training.

NQFs can, certainly, improve information flows about individual skill levels within a system. This is potentially useful if a country has a lot of non-recognised skills (e.g. South Africa under apartheid) or a plethora of awards (England).

However, there is no firm evidence yet that they work in low or middle income countries, and it is questionable whether NQFs are able to meet the needs of the poor, including those in very small and micro-enterprises. Some of the NQFs that have developed have been both costly and laborious. Where the institutional capacity of a TVET system is weak, implementing an NQF is difficult.

A key issue is whether, in such contexts, it can be shown that an investment in building a costly NQF system is likely to be more efficient and effective than other interventions (e.g., active labour market policies; institutional development; curriculum development; staff development; and industry partnerships etc.).

Skills and the Information and Communication Technology (ICT) revolution

The role that ICTs could play in improving delivery of technical and vocational training programmes largely reflects the differential spread of these technologies at the country level, - pervasive in East Asia, but very patchy in much of sub-Saharan Africa. The currently limited outreach of the necessary ICT infrastructure, particularly the internet, as well as the cost of developing this infrastructure would inhibit its use in supporting programme delivery in many developing countries (and especially in rural areas) in the short term.

The rapid spread of mobile phones with internet access, as well as of very low cost computers, in the last five years has opened up large possibilities of personalized, virtual learning. These have already been taken advantage of by open universities systems world-wide, but for many precision work-force skills these new ICT systems may provide a valuable supplement for the theoretical aspects of the particular competency, but not for its hands-on implementation and assessment.

Skills for poverty reduction; Do the poor have access?

The poor in general are known to have limited access to all forms of post basic education and training, including TVSD, although it is also known that many very poor families make enormous sacrifices to secure access to schools and to skills. Evidence suggests that the poor are not to be found in the majority of the pathways to skills development, with the exception of NGO non-profit programmes. Large numbers of poor people do however acquire skills in systems such as in South Asia where the majority of employers recruit their skilled labour through selection from casual or unskilled workers, and are reluctant to use graduates of VTCs or industrial training institutes. In the longer term, the expansion of fee-free junior secondary and of vocational training centres into rural and urban slum areas will begin to take care of this problem; but in the short term, much more policy attention needs to be given to bursaries and merit-based pathways to skill for youth from poor families. By contrast, the vogue for market-led, demand-driven courses will actually exclude the poor.

From skills development to skills allocation & utilisation: the role of the enabling environment

The requirement for vocational skills graduates to be actually allocated to jobs and utilised in the workplace always appears to be more politically necessary than for academic subjects. Nevertheless, the context of utilisation is highly dependent on supportive macro-economic environments, and these are clearly different in dynamic and less dynamic economies. Among the most critical factors in such environments will clearly be the growth in opportunities for work and employment. A fair allocation of skills to work opportunities is dependent on good governance.

Even if skills development cannot directly affect these opportunities, what can be said with certainty is that the good quality of the education and training environment is a crucial precondition for any effective later utilisation of skills in the wider economic environment.

The position of skills development will also be improved as it increasingly becomes a regular element in sector-wide approaches to education and training. Even though skills' training crosses several ministerial borders, national governments and development partners are recognising it as a crucial part of Education Sector Support Strategies.

Skills: a major statistical challenge

Finally, a great deal more is known about some of these TVSD modalities than others.³ Donors and national governments need increasingly to monitor, assess and disseminate their research and consultancy insights on this complex but crucial sector. The Working Group for International Cooperation in Skills Development is one vehicle for just such knowledge-sharing. Equally, there is an urgent need for the Global Monitoring Report Team on the Six Dakar Goals to consider a review and assessment of the global situation on skills development, in the way that has been done so effectively for primary education, quality, literacy, gender and early childhood learning.

³ For instance, the EFA Global Monitoring Report only has a single indicator of students taking TVSD courses at the secondary level. It is extremely difficult to find good data on VTCs, let alone on traditional apprenticeships.

Glossary

Academic-Vocational Divide: Used especially in Anglophone contexts to describe attempts to develop 'unified' systems of academic and vocational education.

Competency-based training: Training that gives more emphasis to trainees' ability to master specific practical tasks or competencies than to the level or type of certification - or to the length of training - they have received.

Demand-driven: When training is demand-driven, it is determined by whether there is a labour market demand for particular skills.

Dual System: This method for the training of apprentices combines attachment to an enterprise with regular periods of training in a vocational school; it is common in Germany, Austria and Switzerland.

Diversified Secondary Schools: This involves a light orientation of general secondary schools towards more practical subjects, such as commerce, domestic science, and agriculture.

Enterprise-based training (EBT): This covers on-the-job training, whether in formal sector firms or in the informal sector.

Informal Sector: This refers to the very large micro and small enterprise economy in urban and rural areas, outside the formal sector. Enterprises are often unregistered and untaxed.

International Development Targets (IDTs): These 6 targets were developed by the Development Assistance Committee of the OECD, out of the series of World Conferences.

Knowledge Economy: Education and training for the knowledge economy suggests a potential relationship between language, information technology (IT) skills and other 'soft skills' and the new jobs produced by globalisation, such as call centres.

Millennium Development Goals (MDGs): These 8 goals were very similar to the IDTs, but were confirmed and elaborated by the UN after the Millennium Declaration of 2000.

National qualifications frameworks: These have predominantly been developed in Anglophone settings; their claim is to bring coherence into what is often a bewildering array of academic and vocational qualifications. Implementation has not been easy.

Non-formal education and training: This covers a whole range of structured programmes outside the regular, sequential schooling or training systems.

Non-State provision: This refers to two kinds of private provision of skills, non-profit and for-profit.

Off-the-job training: Unlike training within the enterprise, this refers to the trainees going to institutions outside the firm for upgrading, and especially for the theory related to their trade.

Poverty Reduction Strategy Papers (PRSPs): These have become almost a condition for agreement on external financing by the World Bank and many bilateral donors. They involve the systematic targeting of poverty reduction measures in many sectors.

Rate-of-Return studies: These have sought to estimate the returns to the individual and to society of investing in the different levels of education; they have been much criticised on grounds of methodology.

Sector-wide Approaches (SWAPS): This concept affirms the importance of looking at national policies across the whole domain of education or health, and not just focusing on a sub-sector like primary education.

Skills development: The acquisition of practical competencies, know-how and attitudes necessary to perform a trade or occupation in the labour market. Skills can be acquired either through formal public or private schools, institutions or centres, informal, traditional apprenticeships, or non-formal semi-structured training. The term does not translate easily into French, Spanish or German.

'Strong' version of vocational schooling: Refers to a more intensive specialisation in vocational education in quite separate schools and streams.

Supply-driven: When training is supply-driven it is determined by the suppliers or providers of training as opposed to the market.

Technical education: Used of school-based preparation for technicians, usually in institutions associated with Education Ministries.

Technical Vocational Skills Development (TVSD): TVSD is intended to marry the well-known older terms, Technical and Vocational, with the newer term, Skills Development.

Traditional apprenticeship: Most well-known in West Africa, traditional (or indigenous) apprenticeship refers to informal enterprise-based skill acquisition.

Training levy; Levy-Grant schemes: These are taxes on the salary bill of company employees which can be recovered through agreed training expenditures

Vocational Education and Training (VET): Commonly used, especially in Europe, along with TVET, to cover the whole skills training system, whether in schools or in training centres.

'Vocational school fallacy': A phrase coined by Philip Foster in the mid-1960s. Foster argued that it was a fallacy to assume that introducing vocational subjects into a school curriculum could have some impact on orientating the aspirations of youth

towards manual work. Rather, the labour market acted as the largest determinant of youth aspirations towards work.

Vocational Education: Used of school-based preparation for craftspeople, usually in institutions associated with Education Ministries.

Vocational Training: Used of the preparation of craftspeople, often in institutions associated with Labour Ministries. But see **vocationalisation** and **vocational school fallacy**

Vocationalisation: Used for the weak version of technical schooling in Anglophone contexts

'Weak' version of technical schooling: Refers to curriculum elements of a vocational or practical kind which are introduced into a school curriculum that remains dominated by general education subjects. A closely related term is **diversified education**.

The Working Group for International Cooperation in Skills Development (WGICSD): This is a network of donors meeting regularly to exchange insights on skills development, with staff-work done by ILO, Swiss Development Cooperation and NORRAG (www.norrag.org/wg/)

Resources by Area

(To access the hyperlinks, hold the cursor over the link, press CTRL and click, or double-click on the link)

History of skills development

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[ILO Skills and Employability Department](#)

[Network for Policy Research Review and Advice on Education & Training \(NORRAG\)](#)

[Working Group for International Cooperation in Skills Development](#)

[World Bank Vocational Education & Training pages](#)

APPENDIX 1

TVSD STATISTICS AND THE EVIDENCE BASE

A note on statistics for TVSD

Some statistics on technical and vocational education enrolments as a percentage of secondary school enrolment are available from UNESCO's Global Monitoring Reports. But this only shows part of the picture. In most developing countries TVSD is delivered across multiple ministries – not just education –, across formal and informal sectors, in school, in VTIs, colleges, centres, on the job, in enterprises and in the field. Obtaining statistics across this diverse range of TVSD modalities has not been standard procedure for any international agency or government ministry. For us to fully understand TVSD it is essential that this changes. Just as UNESCO annually collects data on TVE enrolments in secondary schools, other agencies or development partners need to coordinate and finance the collection of statistics for all the TVSD modalities. This will, perhaps, be hardest for the most widespread TVSD modality – traditional apprenticeship – since by their very nature they are not registered and form part of what Fluitman (2005) calls the 'hidden training world'.⁴

The range of technical and vocational skills development in the least developed countries (LDCs)⁵

Publicly Funded Formal VTIs and School-based TVET in the LDCs

Publicly funded formal skills training is typically provided under a number of different ministries and for this reason ownership and management of public training 'are often complex and fragmented' (World Bank 2004: 63).⁶ School-based technical and vocational education (TVE) is usually under ministries of education, narrower ministries of vocational education and training, or under higher level ministries concerned with technical and higher education (ibid.). Other ministries, such as ministries of labour, typically manage VTIs concerned with delivering vocational skills or other skills training, usually for the informal economy. Ministries of agriculture, industry and public works also sponsor training centres and programmes to meet their needs (ibid).

Formal public TVET delivered through school-based learning or through VTIs represents a small fraction of total skills delivery provision in the LDCs. In Mali, for example, public TVET accounts for about a third of total provision; in Tanzania only 8% of TVET is public (Table 7).

In Sub-Saharan Africa 'the traditional notion underlying both education and training... is that employment refers foremost to wage employment' (ibid. 66). But in the African LDCs, and the

⁴ Fluitman, F. (2005) Poverty Reduction, Decent Work, and the Skills it Takes or: Towards Correcting a Partial View of Training Needs in African Development, in Beveridge, M., King, K., Palmer, R. and Wedgwood, R. (Eds.) (2005) *Reintegrating Education, Skills and Work in Africa*, CAS, University of Edinburgh: Edinburgh.

⁵ This Appendix is from pp 50-63 of King, K. and Palmer, R. (2006) *Skills, Capacities and Knowledge in the Least Developed Countries: New Challenges for Development Cooperation*. Background paper produced for the 2006 UNCTAD Least Developed Countries Report, Mobilizing and Developing Productive Capacity for Poverty Reduction. Centre of African Studies, University of Edinburgh: Edinburgh.

⁶ World Bank (2004) *Skills Development in Sub-Saharan Africa*. World Bank: Washington.

LDCs in general, formal wage employment represents a small fraction of the type of employment, with the majority employed in the informal economy, both in agriculture and nonfarm activities.

In terms of curriculum, the informal economy is generally not taken into account in public education and training policies. Formal TVET in the LDCs, as in other developing countries, is largely not orientated towards the informal economy, with curriculum and objectives more focussed on formal employment. Indeed, formal TVET is well known for being too 'sluggish' at responding to actual labour market demand and, 'in many cases, fails to deliver skills for existing jobs' (ibid. 66). The World Bank comments that:

Public training systems throughout the region [Sub-Saharan Africa] are immersed in a crisis of relevance. Public training tends to be small in relation to general education, imbalanced, and oriented exclusively to wage employment' (ibid.: 65).

Tables 1 to 7 show the percentage of secondary technical and vocational enrolment as a percentage of the total enrolment at secondary levels. The data show that the weight placed on TVE at the secondary level varies quite considerably from country to country. OECD countries have a much higher coverage of TVE in secondary school teaching than developing countries, which in turn have a much higher coverage of TVE than the LDCs do.

Table 1. Secondary Enrolments in Technical-Vocational Subjects

Percent of total enrolments						
	< 2	2 to <5	5 to <10	10 to <20	20 to <30	30 and over
African LDCs	Eritrea Ethiopia Gambia Lesotho Malawi*	Chad Djibouti Equatorial Guinea Guinea-Bissau Mauritania Niger Senegal Sudan Zambia	Benin Burkina Faso Burundi Mozambique Togo Uganda Tanzania Madagascar	Angola Rwanda		Liberia Mali*
Asian LDCs	Bangladesh Bhutan Cambodia Lao PDR Nepal					
Island LDCs	Comoros Sao Tome & Principe	Cape Verde	Maldives	Vanuatu		
Other	All Asian LDCs	All LDCs All African LDCs All Island LDCs	SSA	Developing Countries Latin America/Caribbean East Asia and Pacific	Developed Countries OECD Countries	UK

Sources: Computed by Palmer from UNESCO 2004.⁷

* denotes from Atchoarena and Delluc 2001: 40 and 120.⁸

Specifically, for the African LDCs, TVE enrolment as a percentage of total secondary enrolment goes from a low of 0.5% in Ethiopia to a high of 38.8% in Mali (Table 2). In the

⁷ UNESCO (2004) *Education for all: The Quality Imperative*. Education for all Global Monitoring Report, UNESCO: Paris.

⁸ Atchoarena, D. and Delluc, A. (2001) *Revisiting Technical and Vocational Education in Sub-Saharan Africa: An Update on Trends, Innovations, and Challenges*. IIEP/Prg.DA/01.320. International Institute for Educational Planning: Paris.

case of Ethiopia, TVE has for a long time been only a small part of secondary education. Since 1990, TVE enrolment as a percentage of total secondary enrolment has remained stable between 0.3 to 0.5% (Atchoarena and Delluc 2001: 40). Mali, however, has seen a large increase in TVE enrolment as a percentage of total secondary enrolment. In 1970, the percentage was 10.2%, in 1990 it was 12.6% (Atchoarena and Delluc 2001: 40) and in 2001 it was 38.8%. Since 1990, the Malian government has put several initiatives in place in increase both the quality and quantity of TVE in secondary education, with particular emphasis on the private sector. This increase reflects the government's view that this type of education is an important factor in the development of the industrial fabric (Atchoarena and Delluc 2001: 41).

'Generally speaking, the low percentage of technical and vocational education in general secondary education is partly due to the public's attitude to this branch, which is usually regarded as leading to low-status occupations' (Atchoarena and Delluc 2001: 42). This type of education is considered to be for those who failed in general education (ibid.).

Atchoarena and Caillods point to a contradiction 'between the generally negative image of technical and vocational education and the strategic role it is supposed to play in the race for international competitiveness' (Atchoarena and Caillods 1999 cited in Atchoarena and Delluc 2001: 42).

While school-based TVE is supposed to play this strategic role in developing a country's capacity to compete internationally (ibid.), in the LDCs there are simply not sufficient numbers of the type of formal technical jobs to absorb even these small numbers of TVE school leavers. On the one hand, therefore, it is hoped that school-based TVE will develop a country's industrial capacity, while on the other hand it is precisely the under-developed nature of the existing industrial fabric, and hence lack of formal jobs in this area, that contributes to the negative perception of TVE.

Even while the numbers in school-based TVE in the LDCs are small, those that do graduate from these programmes find themselves constrained by lack of relevant job opportunities. Their own productive capacity therefore becomes potential capacity, a potential that can only be realised given the right economic and labour market environment. In the LDCs, those that are trained in this manner may well find better job opportunities for their qualifications outside their home countries and so migrate taking their skills with them.

Table 2. Enrolment in secondary technical and vocational school as a percentage of total secondary school enrolments in African LDCs, 2001

	Enrolment in technical and vocational education (TVE) Total (000)	Total enrolment secondary education Total (000)	Enrolment in TVE as % of total secondary enrolment
African LDCs (plus Haiti):			
Angola	77	414	18.6
Benin	24 **	287 **	8.4
Burkina Faso	18 **	205 **	8.8
Burundi	9 **	122 **	7.4
Central African Republic	...	...	...
Chad	3 **,z	137 **,z	2.2
Congo, Dem. Rep. of	...	...	...
Djibouti	1	21	4.8
Equatorial Guinea	1	21 **	4.8
Eritrea	2	153	1.3
Ethiopia	9 *	1734	0.5
Gambia	0.4 **	59 **	0.7
Guinea	...	...	...
Guinea-Bissau	1 y	26 y	3.8
Haiti	...	...	...
Lesotho	1	80	1.3
Liberia	45 y	137 y	32.8
Madagascar (1)	18.6 x	326 x	5.7
Malawi	...	...	...
Mali (1)	33 y	85 y	38.8
Mauritania	2	79	2.5
Mozambique	21	402	5.2
Niger	3	112	2.7
Rwanda	21 **	167 **	12.6
Senegal	6 **	291 **	2.1
Sierra Leone	21 z	156 z	13.5
Somalia	...	...	...
Sudan	31	1141	2.7
Togo	17 **,y	261 **,y	6.5
Uganda	31 **	571 **	5.4
United Republic of Tanzania	24 **,y	271 **,y	8.9
Zambia	7	297	2.4
All African LDCs	427	7555	5.7

... missing data

** estimates

(x) Data are for 1996/1997.

(y) Data are for 1999/2000.

(z) Data are for 2000/2001.

(1) Data from Atchoarena and Delluc, 2001 (Madagascar, p.112; Mali, p.120).

Source: Computed by Palmer from UNESCO 2004

Table 3. Enrolment in secondary technical and vocational school as a percentage of total secondary school enrolments in Asian LDCs, 2001

	Enrolment in technical and vocational education (TVE) Total (000)	Total enrolment secondary education Total (000)	Enrolment in TVE as % of total secondary enrollement
Asian LDCs:			
Afghanistan	...	...	...
Bangladesh	124	10691	1.2
Bhutan	0.4	26	1.5
Cambodia	9	476	1.9
Lao People's Democratic Republic	5	320	1.6
Myanmar	...	...	...
Nepal	21	1690	1.2
Yemen	...	...	...
All Asian LDCs	159.4	13203	1.2

... missing data

Source: Computed by Palmer from UNESCO 2004

Table 4. Enrolment in secondary technical and vocational school as a percentage of total secondary school enrolments in Island LDCs, 2001

	Enrolment in technical and vocational education (TVE) Total (000)	Total enrolment secondary education Total (000)	Enrolment in TVE as % of total secondary enrollement
Island LDCs:			
Cape Verde	1	46	2.2
Comoros	0.2	34	0.6
Kiribati	...	...	...
Maldives	2	25	8.0
Samoa	...	...	...
Sao Tome and Principe	0.04	7 **	0.6
Solomon Islands	...	...	...
Tuvalu	...	...	...
Vanuatu	1	10	10.0
All Island LDCs	4.24	122	3.5

... missing data

** estimates

Source: Computed by Palmer from UNESCO 2004

Table 5. Enrolment in secondary technical and vocational school as a percentage of total secondary school enrolments selected regions, 2001

	Enrolment in technical and vocational education (TVE) Total (000)	Total enrolment secondary education Total (000)	Enrolment in TVE as % of total secondary enrollement
All African LDCs	427	7555	5.7
All Asian LDCs	159.4	13203	1.2
All Island LDCs	4.24	122	3.5
All LDCs	539.04	20469	2.6
Sub-Saharan Africa	1855	24073	7.7
Developing Countries	37311	358392	10.4
Latin America and the Caribbean	5716	57159	10.0
East Asia and the Pacific	25640	149732	17.1
Developed Countries	17676	85816	20.6
OECD Countries (x)	18469	74420	24.8
United Kingdom	5255	9630	54.6

(x) OECD data excludes Ireland, New Zealand, Poland and the United States as full data not available

Source: Computed by Palmer from UNESCO 2004

A further factor to consider is that TVE at the secondary level reaches very few of those in the school-age population since secondary education is not well developed in developing countries, and particularly in the LDCs. For example, table 8 shows that, for the data that was available, the African LDCs have on average only a 1% enrolment in secondary school TVE as a percentage of the total school-age population.

Table 6. Enrolment in secondary technical and vocational school as a percentage of total school age population in selected African LDCs, 2001

	Age Group	Enrolment in technical and vocational education (TVE) Total (000)	Total school-age population education Total (000)	Enrolment in TVE as % of total school-age population
African LDCs (plus Haiti):				
Angola	10-16	77	2168	3.6
Benin	12-18	24 **	1106	2.2
Burkina Faso	13-19	18 **	2004	0.9
Burundi	13-19	9 **	1143	0.8
Chad	12-18	3 **,z	1273	0.2
Djibouti	12-18	1	105	1.0
Equatorial Guinea	12-18	1	71	1.4
Eritrea	12-17	2	553	0.4
Ethiopia	13-18	9 *	9104	0.1
Gambia	13-18	0.4 **	171	0.2
Guinea-Bissau	13-17	1 y	154	0.6
Lesotho	13-17	1	236	0.4
Liberia	12-17	45 y	445	10.1
Mali (1)	13-18	33 y	1748	1.9
Mauritania	12-17	2	364	0.5
Mozambique	11-17	21	3035	0.7
Niger	13-19	3	1727	0.2
Rwanda	13-18	21 **	1156	1.8
Senegal	13-19	6 **	1559	0.4
Sierra Leone	12-17	21 z	611	3.4
Sudan	12-16	31	3572	0.9
Togo	12-18	17 **,y	761	2.2
Uganda	13-18	31 **	3388	0.9
United Republic of Tanzania	14-19	24 **,y	4943	0.5
Zambia	14-18	7	1232	0.6
All African LDCs		408.4	42629	1.0

... missing data

** estimates

(x) Data are for 1996/1997.

(y) Data are for 1999/2000.

(z) Data are for 2000/2001.

(1) Data from Atchoarena and Delluc, 2001 (Madagascar, p.112; Mali, p.120).

Source: Computed by Palmer from UNESCO 2004

This compares to a 5.9% average for all developing countries, and a 20.9% average for all developed countries (computed by Palmer from UNESCO 2004). These averages do need to be read with some caution. It should be remembered that the raw data on which they are based is emerging from national ministries whose capacities are very fragile, and especially in the area of statistics. It should also be emphasised that the apparently substantial differences between LDCs and other developing countries (ODCs) can be misleading. This is particularly the case where there may be a widespread local or regional tradition of how employers prefer to recruit and train skilled labour. This can cut across the LDC-ODC divide. For instance in South Asia, the profile of vocational and technical education is very 'distressing' – to quote the *Human Development in South Asia* report (Haq and Haq 1998:

98).⁹ The average for South Asia of technical enrolment as a percentage of total secondary enrolment is as low as 1.5%, including India and Pakistan along with Bangladesh. This should be contrasted with an East Asia average of 10%. The same contrast can be seen in the proportions of the budget allocated to vocational and technical education. Here, India and Pakistan at 4% and 2% respectively may be larger than Bangladesh at 1%, but the important contrast is with East and South East Asia, where, for example, Malaysia allocated 18% of its budget to this subsector.

Apart from the school-based technical and vocational training in the LDCs, another formal, public-funded, path to acquiring TVET is through vocational training institutes or centres. These usually operate under ministries of Labour and are often geared, at least in theory, towards training for the informal economy. Figures are not available on the extent of publicly funded VTIs in the LDCs, but it is likely that they are not widespread. VTIs are likely to be most prevalent among non-government providers (discussed later). Those VTIs which are run by the government are likely to also be focussed on certification and formal employment and will generally be slow at reacting to market demand.

In general, in the LDCs most people work in agricultural occupations, but contribute little to GDP. For example, in Angola 71% of the labour force is engaged in agriculture, yet agriculture produces just 8 percent of GDP (2002). In Chad 73% of the labour force is engaged in agriculture, yet contribute 37% to GDP (2002). In Niger 87% of the labour force is engaged in agriculture, yet contribute 40% to GDP (2002). Among all the LDCs, on average 69% of the labour force is engaged in agriculture, yet agriculture produces 33% of GDP (2002) (UNCTAD 2004: 323).

In the LDCs, where most of the population are engaged in agriculture, poverty reduction and improved incomes depend on higher agricultural productivity and reinforcing the trend towards commercial agriculture. What is needed are new crop varieties, new production technology, better know-how and so on, and these measures to raise productivity require strong systems for research, extension, education and training (World Bank 2005):¹⁰ The development and spread of new crop varieties and production technologies depend on effective research and extension services - to communicate timely information and developments in technology and sustainable resource management to farmers and to relay farmer concerns to researchers;

Developing the knowledge and skills among producers to use inputs and new technologies appropriately depend on effective extension system and supportive education and training programs, including basic education for farmers, middle level training for extensionists and higher level science for researchers; improved markets require farmer knowledge of market functions and skills in farm enterprise management. (World Bank 2005)

Agricultural education and training (AET) 'has three primary target audiences: farmers (subsistence and commercial), extensionists and farmer services personnel (public and private), and tertiary level teachers and researchers. These audiences are reached through different levels and types of AET, ranging from informal farmer training to middle level agricultural colleges that prepare farm managers and extension specialists to post-graduate faculties of agriculture where researchers are trained' (Saint 2005: 5-6).¹¹

⁹ Haq, Mahbub ul, and Khadija Haq (1998) *Human development in South Asia 1998: The Education Challenge*. Human Development Centre, Oxford University Press, New Delhi.

¹⁰ World Bank (2005) *Knowledge and skills for agricultural productivity in Sub-Saharan Africa (SSA)*, An Outline. World Bank: Washington.

¹¹ Saint, W. (2005) 'Who understands African agriculture? Too few!' paper to *Skills Development for Rural People: A Renewed Challenge*, held in Rome on November 10-11, 2005, Working Group for International Cooperation for Skills Development, Graduate Institute of Development Studies: Geneva.

In the LDCs, ministries of agriculture often run formal agricultural training centres, but again, there appears to be a lack of statistical data for the LDCs regarding enrolments in formal agricultural training courses. What is clear, however, is that '[h]uman capital shortages constitute a major constraint in Africa's agricultural development... [and] that greater attention should be given to strengthening Africa's institutional capacities for technical and professional education for the agricultural sector, especially at the post-secondary level' (Saint 2005: 1).

In Sub-Saharan Africa, largely as a result of structural adjustment policies and reductions in public spending in the 1990s, 'domestic investment in agricultural education and training collapsed' (Saint 2005: 2).

Like other publicly funded formal training institutes, agricultural education and training (AET) tends to be disconnected with labour market demand. They 'remain largely supply-driven, although changing conditions in global agricultural trade, technology and labour markets would suggest that they should be much more demand-responsive' (Saint 2005: 3).

In terms of AET delivery, there is a 'chronic underinvestment in the skills of women farmers... [which serves as] a handicap for African agriculture' (Saint 2005: 4). Since women 'play a dominant role in African agriculture and produce more than half the agricultural output in most societies... this omission inhibits opportunities for agricultural investment, growth and income' (ibid).

Non-government TVET in LDCs

In Sub-Saharan Africa, including the African LDCs, non-government providers of training represent 'a significant and growing part' of TVE (World Bank 2004: 91). Non-government providers include for-profit and non-profit institutions (e.g. religious-based providers and other nongovernmental organizations/ NGOs) as well as formal and informal enterprises. Those non-government providers that provide training for the informal economy occupations have the potential of increasing the productivity of operators in these occupations, provided that graduates are also supported by a facilitating enterprise infrastructure. The non-profit institutions often 'give considerable attention to social objectives such as training of the poor' (World Bank 2004: 91).

In terms of quantity, non-government providers often outnumber public sources of training and, in a number of LDCs, the majority of trainees are enrolled in non-government institutions (World Bank 2004: 93) (Table 7). This makes non-government providers in the LDCs very important players in the delivery of skills to the population.

Table 7. Non-government providers on TVET in selected African LDCs

	Non-government providers of TVET (%)
Mali	c.66
Tanzania	92
Zambia	82
Madagascar	75
Senegal	>50

Source: World Bank 2004b

For instance, in Mali non-government training makes up two-thirds of all enrolment in TVET. Between 1993 and 2000, the number of non-government providers increased from 11 to 71,

and between 1997 and 1999 enrolments increased by 86% (World Bank 2004: 95). In Tanzania 92% of training is non-governmental (for-profit 35%; church/NGO 31%; company 22%; other 4%; public 8%) (ibid.: 93). In Zambia 82% of training is nongovernmental (for-profit 36%; church/NGO 18%; company 7%; community 14%; foundation 7%; public 18%) (ibid. 94). In Madagascar non-government training is now responsible for training 75% of all trainees. Between 1990 and 1996, enrolment in non-government training increased by 70% with public enrolment decreasing over the same period (ibid.). In Senegal, non-government providers are responsible for training more than half of all TVE students, with enrolments increasing by 84% between 1995-2000 (ibid.: 95).

Non-government providers exhibit a number of distinct characteristics in these countries. One is the general lack of cooperation and coordination between non-government providers and the government, and hence public TVE providers. The World Bank notes that:

An unfortunate characteristic of nongovernment training organizations is their often complex and uneasy relationships with the government... For-profit TVET is often viewed with disdain and suspicion. Nonprofit training is regarded as insignificant. In turn, operators of nongovernment institutions often do not trust the government bureaucracy as they get little or no support from it. This kind of mutual distrust runs counter to the cooperation required if overall skills development is to progress in a partnership. (World Bank 2004: 96)

Compared to the public providers, non-government institutions are often better able to show greater flexibility, adaptability, and imagination in responding to labour market demand (World Bank 2004: 99). For example, in Senegal and Mali:

the nongovernment sector has invested in new market niches that are considered to have growth potential (information technology, tourism), but are neglected by a state education sector that in many respects is ossified and turned inward toward programs and courses that in some cases are completely obsolete. (Atchoarena and Esquieu 2002: 135–36)¹²

Another example from Uganda illustrates the responsiveness of the non-government sector to the labour market. The management of the Mengo Institute of Technology have established new courses in welding, radio repair, motor rewinding, catering, and business skills, which were seen to be in high demand (Haan 2001: 105).¹³

With respect to links with employers, Atchoarena and Esquieu (2002) found there to be little difference between the non-government and public providers; in both cases there is little evidence that internships or other work placements occur. 'Part of the reason for indifference to employers may be the obsession of both public and nongovernment providers with teaching official curricula and preparing students for state-administered final examinations' (World Bank 2004: 99-100).

However, limited evidence exists to 'suggest that students from nongovernment institutions may perform better than those from public institutions on examinations' (World Bank 2004: 101).

¹² Atchoarena, D. and Esquieu, P. (eds.) (2002) *Private Technical and Vocational Education in Sub-Saharan Africa: Provision, Patterns, and Policy Issues*. IIEP/Prg.DA/01.300. International Institute for Educational Planning: Paris.

¹³ Haan, H. (2001) *Training for Work in the Informal Sector: Fresh Evidence from Eastern and Southern Africa*. International Training Center, International Labour Organisation: Turin, Italy.

In terms of the quality of training provided in non-government providers, this varies greatly from one institution to the next. A study by Atchoarena and Esquieu (2002) noted that the variation in quality is likely to be larger between the diverse group of non-government providers than it is with public providers 'which are all subject to the same rules' (ibid.: 11).

Formal enterprise-based training also makes up part of overall non-government skills provision in the LDCs. Since the LDCs have generally small formal sectors, this type of training is thus not widespread overall (note that enterprise-based training in the informal nonfarm sector is widespread, as discussed later). However, for those formal enterprises that do operate in the African LDCs, and Sub-Saharan Africa more widely, the extent of training is significant and widespread (Dabalén, Nielsen, and Rosholm 2002),¹⁴ with 'virtually every company put[ting] shop-floor employees through some kind of training' (World Bank 2004: 112). Training in formal enterprises can either be formal or informal in nature:

Formal training means organized training that takes the trainee off the job site and is delivered mainly in classrooms. This training is often general in nature, not specific to the firm. Informal training means training that is in the workplace and is not delivered as part of a formal training program. (World Bank 2004: 112)

However, it would appear that in the formal sector, formal apprenticeship schemes are declining. This is a result of an over-supply of adequately trained people for too few formal jobs, hence making it easy for formal sector companies to find workers with sufficient education (World Bank 2004: 109).

One of the paradoxes of the under-provision of TVET in many LDCs is that despite the very small numbers of graduates, there is substantial evidence that they find it difficult to secure work. Many employers continue to be convinced that minimal training on the job by general education graduates is preferable to hiring those with formal vocational qualifications. Changing the convictions of such employers is hugely problematic, whether in the formal or informal sectors.

On-the-job Training in the Informal Economies of LDCs

The informal economy, which includes agriculture, is by far the largest employer in LDCs, with the poor almost exclusively employed in this area. For this reason, in a discussion on utilizing and developing productive capacity for poverty reduction, it is crucial to discuss the utilization and development of skills development in the informal economies of the LDCs. In many developing countries, including the LDCs, those that cannot get access to the formal TVE level, including training in VTIs and school-based TVE, have only one source of training, traditional apprenticeship (cf. Atchoarena and Delluc 2001). The World Bank highlights the importance of skills for the informal economy in its *Education Sector Strategy Update*: '[R]eaching the informal sector with skills development will be important for poverty reduction' (World Bank 2005: 9). The Bank's *Skills Development in Sub-Saharan Africa* also notes that '[s]kills are an important means to increase incomes and sustainable livelihoods for the poor' (World Bank 2004: 17). Further, in 2000, the Bank's *Can Africa Claim the 21st Century?* noted that poverty reduction requires investing in the productivity and skills of economically and socially vulnerable groups (World Bank 2000).

Similar to other developing countries, traditional apprenticeship training represents the main means of skills development for the informal sector in LDCs, and requires greater official

¹⁴ Dabalén, A., Nielsen, H. and Rosholm, M. (2002) *Enterprise Training in African Manufacturing*. Unpublished document, World Bank: Washington.

recognition than it currently gets (UNESCO-IIEP 2004: 55).¹⁵ In Senegal, for example, traditional apprenticeship training is not part of national vocational training policies and receives little government support (UNESCO-IIEP 2004).

Skills training in the informal economy is the most accessible and widespread form of training both for out-of-school youth, and for primary and lower-secondary graduates. Far greater numbers of the poor (and not so poor) are trained in this way, rather than through public or donor-financed skills programmes that are designed with the specific objective of training for self-employment, or training to upgrade or supplement existing skills acquisition in the informal economy.

Traditional apprenticeship training is especially well developed in West Africa (World Bank 2004: 131), and the mechanism of delivery is well known (Box 1)

Box 1 – Sequence of Steps in Apprenticeship Training in Chad

1. familiarization with the tools and materials of the trade;
2. perform rudimentary tasks such as cleaning pieces, and gathering, holding and handing tools to the boss and more experienced apprentices;
3. disassembling different components or items;
4. performing simple tasks, especially parts of a larger job, including assembly;
5. basic diagnosis (for repair vocations) or design (for production vocations); and
6. progressively more involved or sophisticated levels of steps 3, 4 and 5.

Source: Muskin 1997: 11.

Muskin, J. (1997) *Tinkering with the Tailor. Meeting training needs in the informal sector of Chad*. A study for the World Bank on training in Chad's informal sector, Florida State University.

Traditional apprenticeships are known to have a number of general advantages and disadvantages (cf. World Bank 2004: 133-134). Informal skills training serves the informal economy well, but is proving too narrowly focused to cope with the increasing challenges of technical change, skills enhancement, and wider markets (cf. Ziderman 2003: 154).¹⁶ In general, since skills development in the informal economy occurs on-the-job, then the delivery context for the training is intimately linked to the enabling or disabling enterprise environment of the informal economy itself. And in Sub-Saharan Africa, and the African LDCs in particular, support for productive enterprises in the informal economy is weak at best.

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¹⁵ UNESCO-IIEP (2004) *Promoting Skills Development*. Report of an Interregional Seminar on 'Assisting the design and implementation of Education for All skills development plans: skills development to meet the learning needs of the excluded', Paris 22-23 January 2004. UNESCO: Paris.

¹⁶ Ziderman, A. (2003) *Financing Vocational Training in Sub-Saharan Africa*. Africa Region, Human Development Series. World Bank: Washington.