Reforms in The Indian Vocational Education and Training System

The Labor Market Context and Supply of Skills
Largely because of the growth in factor productivity, India's economy has grown rapidly over the past decade. Growth in total factor productivity represents growth in output not accounted for by growth in inputs such as capital and labour. Continuing to raise labour productivity while at the same time generating enough jobs for a growing labour force is proving a massive challenge. This issue has come into sharp focus over the previous decade when economic growth accelerated but employment growth fell to less than half that of the 1980s, raising fears that India is witnessing jobless growth (Narain, 2006).

The wages of workers with qualifications beyond primary school have grown far more rapidly than those of workers with primary school or less; the greatest increases being for workers with tertiary qualifications. This movement in wages shows that education and skill acquisition are important determinants of job prospects.

There is evidence of growing demand for workers with secondary education but the same cannot be said of workers with technical/vocational skills. Since the early 1980s, the relative wages of workers with secondary education have been growing even as these workers have become relatively more abundant. However, the relative supply of workers with technical/vocational skills has declined throughout this period while their relative wages have also come down since the early 1990s. This may be due more to the fact that workers with technical/vocational qualifications do not have skills that meet the labour market (often because of the poor quality of training provided) than that there is little demand for skilled workers. It is also possible that students see little labour market benefits from undertaking vocational education and training courses and opt for other more attractive educational options.

Although the number of workers with some education has grown, the overall educational attainment remains low in absolute terms and by comparison with other countries. Analysis shows that while India has improved its performance in educational attainment over the last decade, countries such as China, Mexico, South Africa, and Russia have made much larger gains in strengthening their education pillar – not only in terms of quantity but also in terms of quality (Dahlman and Utz, 2005).

While significant improvements will need to be made on quantitative indicators, little is known about qualitative indicators. Because India does not participate in standardized international examinations, there are no good comparative measures of quality. Providing more education and skills cannot, by itself, be enough – quality and labour market relevance is crucial. The education and skills provided must be relevant to the labor market. Acquiring skills is essential, provided those skills are not out-dated or do not meet industry requirements.

Vocational Education
The vocational education stream is quite small, enrolling less than three percent of students at the upper secondary level. Vocational education courses are offered in schools at Grades 11 and 12

1 The World Bank, Washington D.C. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the World Bank.
(in most states with vocational streams, vocational and general courses being offered by the same institution). These are aimed at preparing students for entry into the labour market. There are about 7,000 schools, almost all in the public sector, enrolling close to 400,000 students in the vocational education stream – utilizing just 40 percent of the available student capacity in these institutions. These schools offer a total of over 100 courses in various areas - agriculture, business and commerce, humanities, engineering and technology, home science and, health and para medical skills.

Vocational students appear intent on entering higher education rather than entering the labour market (Kremer, 2000). Overwhelmingly, students who get through the vocational stream want to proceed to further education. This is not surprising given the relatively weak labor market outcomes. The few rigorous evaluations of program impacts that have been undertaken point to low levels of gainful employment of these graduates. Despite the poor outcomes there is some pressure to expand vocational education. Even though enrolments in vocational education in India are small when judged by international comparisons, expanding the numbers or re-targeting the program is not considered justified unless a model is found that would substantially improve outcomes.

International experience suggests that employers mostly want young workers with strong basic academic skills, and not necessarily vocational skills (Johanson and Van Adams, 2004). What employers are looking for are individuals who have the ability to communicate, solve problems and work in teams, and not students trained in a narrow vocational skill. Even in countries with large vocational education systems there is a trend towards moving to a more general education system and increasing generalization of the vocational curricula. Experience worldwide suggests that India would do well to not expand its vocational education system but focus on strengthening its general education system.

To make the existing vocational education system relevant to market needs, a major restructuring of the system and how it is managed are needed. If India wants to emulate countries where the vocational education system has succeeded, sweeping reforms are needed. This will require significant commitment from both the national and state level policy planners. Key among the desired reforms include: (a) ensuring private sector participation in management of institutions and curriculum design to ensure a direct connection to the labor market for graduates, and an effective medium for bringing about organizational and productive innovations; (b) strengthening the general education component of these programs for providing basic knowledge in humanities and sciences, preparing students to work in various occupations, teaching them to solve problems and encouraging them to continue learning; (c) funding and budget allocations should move from a system which is exclusively financed on an ad-hoc basis by the government to one where incentives for performance should guide funding and budget allocation; and (d) ensuring that vocational education is not a dead end - allowing well performing students from the vocational education stream to proceed onto higher education will ensure that the vocational stream is not seen as an option of last resort by prospective students.

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**Vocational Training in the Public Sector**

Certificate level crafts training institutions provide training to about 700,000 students. This pathway is open to five million or so students a year who leave school after completing Grade 10. About 80 percent of the students take admission in engineering trades, and the remainder in the non-engineering trades. In addition, there are about 150,000 apprentices in various industries.

Labour market outcomes for graduates of the training system are fairly poor. Even three years after graduation, over 60 percent of all graduates remain unemployed. Although a significant proportion of apprentices find employment, close to two-thirds are not employed in the trade for which they were trained – a third of these having been trained in obsolete trades (ILO, 2003; DGET, 2003; EDCIL, 2005)). There appear to be three reasons for this: (1) limited growth and labor demand in the manufacturing sector, (2) mismatch between the skills attained and those actually in demand, and (3) mismatch between the skills taught and the graduates’ own labor market objectives.

Employers still experience problems finding employees with the right skills. In most cases, these shortages are in trades that were supplied by the Industrial Training Institutes (ITIs) – implying that their graduates do not suit employers’ needs. Most employers feel that ITI graduates do not perform well enough in the use of computers, practical use of machines, communications and team work practices. Employers also feel that graduates lack practical knowledge and need significant on-the-job training to bring their skill levels to match the needs of the industry.

These poor outcomes arise owing to the public training system facing many constraints. These include the following: (a) a preoccupation with providing and financing training has resulted in the government neglecting a key role – providing information about the availability and effectiveness of training programs; (b) institutions do not have incentives to improve their performance because institution managers have little freedom to fill student places to capacity, replace training courses with new ones, and ensure that students receive quality training; and (c) industry involvement in the vocational training system is nascent. Until recently there was limited participation of employers in defining training policies and developing courses. This is now changing, and industry associations and individual employers are showing considerable interest in involving themselves in developing and managing ITIs.

The Directorate General of Employment & Training (DGE&T) should continue to be responsible for overall policy making, and play a more central role in coordinating and overseeing the system. This would involve coordinating the overall training system, overseeing financing of training, curriculum development, supervising skills testing, certification and accreditation, and provision of information on the quality and effectiveness of institutions. Critical to the success of such a body is the role of employers. Unless employers are given a prominent role in the decision making process, training may not be adjusted sufficiently to meet their needs.

A key role of the government should be in the provision of information and facilitating the evaluation of training provided in institutions. This includes the provision of information on the nature and quality of training available, and facilitating regular and independent evaluations on the impacts of training.
programs. Expanding this role may be one of the most effective ways for governments to foster the development of a relevant and cost-effective Vocational Training System (VET) system (Gill, Fluitman & Dar, 2000).

At the institutional level, involving the private sector in management is going to be critical if institutions are to be responsive to labour market needs. Institutional Management Committees (IMCs), chaired by the private sector and involving employers, are increasingly being formed. However, as yet these bodies only act with limited decision making powers and that, too, in respect of a few training programs. Unless they are given greater control over decision making at the institution level, their efficacy will be limited.

Involving employers in management will only yield positive results if state governments are willing to provide institutions with greater autonomy and make them more accountable for performance. This means letting institutions administer themselves and keeping the funds they raise through fees and production. Elements of autonomy that should be introduced include:

• letting ITIs, in consultation with employers, decide on their own training programs;
• giving institution managers the freedom to hire and fire teachers, including contract teachers and non-teaching staff;
• allowing ITIs to generate revenues by selling goods and services; and
• allowing ITIs to set more realistic fees (while the government will still bear a significant portion of the financing).

However, autonomy is not a panacea. It needs to be accompanied by a new accountability framework for ITIs.

Indicators of internal and external efficiency should be used to measure the performance of institutions and to match performance to financing.

In the medium-term, a further development designed to bring about greater consistency and cohesion among the many players may be the establishment of a National Qualifications Framework (NQF). It will be important to develop an NQF based on specified standards of training, leading eventually to the development of industry-relevant modular courses. It should also provide a framework for establishing course assessment requirements and entry pre-requisites. The development of the NQF needs to be managed by a national level Coordinating Authority but implementation must be left to the states.

Training for the Informal Sector

Over 90 percent of employment in India is in the ‘informal’ sector, with employees working in relatively low productivity jobs. Provision of appropriate skills may thus be an important intervention to increasing the productivity of this workforce. However, both demand as well as supply-side constraints have inhibited skills development. On the demand-side, few employees in the informal sector see the importance of skills training. Many identify lack of access to capital, cumbersome bureaucratic procedures, and lack of access to quality equipment as their main challenges (Liimataninen, 2003).

On the supply-side, there has been a variety of attempts to assist with training in the informal sector. The most important are probably Community Polytechnics (training about 450,000 people a year within communities), Jan Shikshan Sansthan (offering 255 types of vocational courses to almost...
1.5 million people, mostly women) and the National Institute of Open Schooling (NIOS) (offering 85 courses through over 700 providers recognised by the NIOS). None of these programs has been evaluated rigorously (Mitra, 2003).

Public training institutions play a limited role in producing skills for the informal sector. While one of the mandates of ITIs and ITCs (privately managed and funded industrial institutions called Industrial Training Centers) is to train workers for the informal sector, evidence shows this is rarely the case. The share of ITI graduates who entered self-employment or became employers was not much greater than 10 per cent while only around 5 per cent of ITC graduates joined the unorganized economy. The main reason is that running a small business requires much more than simply possessing a particular occupational skill. It requires the ability to run a small business, which requires a person to be multi-skilled. This sort of training is not imparted in the ITIs and ITCs.

The diverse training needs of informal sector operators cannot be met by simply reorienting public training institutions. Public institutions would find it difficult to make the changes and serve both the formal and informal sectors with the same skill and experience. It would require a major investment to upgrade facilities and equipment, to attract, develop, and retain new staff, and to develop new curricula and materials to be able to provide the package of skills needed by the informal sector. Locally based non-government training providers may be more effective in providing services that meet the needs of the informal economy. The Ministry of Labor and Employment has started implementing a program called Modular Employable Scheme (MES) involving non-government training providers and private independent assessors. The scheme, however, would need a rigorous monitoring and evaluation system.

Outside of institutions, training in the informal sector is provided through traditional apprenticeships but they have significant weaknesses. More young people acquire competence through traditional (informal) apprenticeships. Although reliable data for India are not available, figures for other countries suggest it could amount to anywhere between 50 to 70 percent of employees in micro-enterprises. These apprenticeships are based on traditional technologies and ideas from previous generations, and the quality of training is only as good as the skills of the master and the master’s willingness and ability to pass on those skills. The theoretical aspect of learning is weak or absent; only the simplest skills are learnt, resulting in low quality products.

The governments can play a facilitating role in training for the informal sector. Instead of delivering training themselves, governments could focus on creating an environment to support non-public providers through: (a) establishing a policy framework (regulations and incentives); (b) supporting curriculum development, training of trainers, and competency-based skills testing; (c) stimulating investment through tax incentives or financial support so as to increase the capacity and the quality of training; and (d) revising apprenticeship acts that are outdated and contain regulations that hamper enterprise-based training.

Although it is not easy to improve the quality of informal apprenticeships, there are successful examples. The strategy revolves around traditional forms of training, by upgrading the technical and management skills of the masters as well as their skills in pedagogy.

Locally based non-government training providers may be more effective in providing services that meet the needs of the informal economy.
Traditional apprenticeships should be linked with specialized training providers or master craftsmen, with the governments acting as facilitators.

Private Provision of Pre-employment Training

Data suggest that, apart from privately managed and funded Industrial Training Centers (ITCs), India has a weak non-public training market. While it is not possible to document the size of the private training sector owing to the large number of unaccredited training providers, the number of places on offer appears to be less than the number of places offered by ITIs and ITCs. However, anecdotal evidence suggests that the size of this sector is increasing.

There are significant differences between public and private provision of training. Only about 15 percent of students are enrolled in engineering-related trades, compared to over 80 percent in ITIs and ITCs. The average duration of courses is also shorter than that in ITIs and ITCs and student/teacher ratios are significantly higher. While some institutions receive funds from the government, most are financed through fees.

In terms of outcomes, the results appear mixed. ITC graduates do not fare better on the labor market than do graduates from ITIs. The other private training providers reported that only 50 percent of their graduates were employed within six months of leaving the centers. However, it is interesting to note that employed workers trained in private institutions derive productivity benefits from participating in training (while gains to employees receiving training in public institutions are insignificant).

Key problems faced by private training providers include lack of access to resources and regulatory barriers hindering entry into the training market. Many private providers identified the lack of access to credit, and financing of initial investments in the private training center as key constraints to setting up training centers with adequate facilities, and in upgrading centers. While the level of regulations are not uniform across states, in many cases private providers complain about excessive government bureaucracy in the registration of training institutions, as well as in accreditation and certification of courses provided. In order to get around this, many institutions often end up being unaccredited.

To assist the growth of private training provision, the government needs to remove constraints on setting-up training institutions. Making legislation clear and registration procedures simple and unbureaucratic will ensure a vigorous private sector response. Furthermore, public provision should not be allowed to crowd out private supply. The government should not set up subsidized training institutions in sectors where the private sector is likely to proliferate.

Here again, a key role that the government can play is in disseminating information on quality of training provided. State governments need to play a more active role in disseminating relevant information (for example, type of training provided, fees, and particularly the dropout and completion rates of different providers).

In-service Training

While important, skills rank below other constraints to productivity among Indian firms. Indian employers rank four other constraints as more important than “skills and education of available workers”. The top three constraints are “tax rates”, “policy uncertainty”, and “access to finance” (Tan & Savchenko, 2005).
This may account for manufacturing establishments in India providing less in-service formal training than the average for Europe, East Asia and Latin America (Batra and Stone, 2004). Surprisingly, in-service training in India is also lower than other countries in the South Asia region. No more than 7 percent of employees received training in a given year. The proportion of workers being trained is especially low among micro and small businesses where fewer than 4 percent of employees have received training. Businesses that use more sophisticated technologies are more likely to train their workers. There are also significant variations in the provision of training across states.

Under-investment in in-service training requires policies that improve the business environment in general. Improving the investment climate in India would, of itself, create incentives for the private sector to invest in physical and human capital. Private sector demand for training would be increased by policies to improve access to new technologies and to funding for investments in technology upgrading and upgrading worker skills.

Market failures diminish employer incentives to train and there are several policy measures that the government can take to alleviate this problem. These include: (a) alleviating the high cost of training by undertaking financial sector reforms that improve access to funding for all kinds of investments, including training; (b) addressing lack of adequate information by widely disseminating the evidence of the productivity benefits of training, best practices in training know-how, and information about the availability, offerings and cost of services from different public and private providers; and (c) providing financial incentives (e.g. tax deductions, matching funds) to employers to encourage them to train their workers.

**Financing Vocational Education and Training**

Funding is still narrowly focused on publicly provided training. With state training authorities focused on providing training through the public sector, almost no attention is paid to using financing as an innovative means to encourage either good quality public training, private training or as a way of providing incentives to enterprises to train their workers. States are losing a valuable opportunity to leverage their limited training financing resources.

It is difficult to get a clear picture regarding trends in financing. This is mainly because data on financing of both vocational education and training are difficult to obtain. State level finance data on vocational education are usually reported together with data on general secondary education, while finance data on vocational training are reported together with data on other training. It is extremely difficult to disaggregate the financial data. Having said that, the limited available data suggest that the total public funding for vocational education is around $40 million/year, while that for vocational training is around $250 million annually.

The funding model used by the states is largely ineffective. Although the resources available to the states are limited, no state seems to follow a transparent funding formula in funding vocational education or training. Once an institution begins to receive funding, subsequent funds are guaranteed irrespective of the institution’s performance. The same levels of finance are allocated to poorly performing institutions with high drop-out rates as to those that maintain a high quality of teaching and performance.
Training providers have insufficient interest in their financial state of affairs. Student fees in ITIs are retained by the respective state governments and the institutional functionaries have no financial incentive to meet labor market needs, which is a common failing of supply-driven models of VET. Although unit costs are high, expenditure on critical training inputs remains low as the majority of the funds are spent on salaries.

While the government remains a major financier of pre-employment training, emerging skill needs require innovative solutions. The public training system still constitutes an important provider and financier of pre-employment training in India. This simple financing framework has become inadequate to meet the skill development needs in a rapidly globalizing economy, and it has become important to consider how financing can also foster increased in-service training among enterprises, greater private provision of training, as well as greater cost-sharing with beneficiaries. Given this, there are two sets of issues that merit attention of the policy planners: (a) how to best mobilize resources for training; and (b) how to allocate resources most effectively to arrive at the desired objectives.

**Resource Mobilization**

There is a need for students and the private sector to bear some of the costs of training. (a) Students:

Currently students pay fees that amount to less than five percent of course costs. A more realistic costing structure should be considered, where the students pay a larger proportion of actual training costs. Realistic fees could, of course, shut out those who are unable to pay. For these individuals, targeted programs like scholarships or reduced subsidized fees can be introduced. (b) Businesses:

Businesses could be charged training levies (a certain percentage of payroll contributions – similar to the education tax currently levied by the Central Government) and then be reimbursed part or whole of that amount depending on the amount of training they undertake in recognized public or private sector firms. This would not only stimulate firms to train more, but would also have the additional benefit of making training providers more responsive to the labor market. However, levy schemes are difficult to design and require a high degree of administrative efficiency and transparency, so this option needs to be carefully thought through before it is pursued in the medium-term (Canagarajah, Dar & Murphy, 2003).

Additionally, institutions should also be given greater latitude to generate resources and use the proceeds for operating costs. Income generated from the sale of production and service activities of trainees can constitute a useful form of additional institutional income. It is possible to produce output for sale in the local market, and exposure to local markets may lead to more relevant, market oriented training. Here the issue is one of maintaining a healthy balance between these two activities. As more weight is given to instruction, the income potential from production declines; alternatively, quality of training will suffer as emphasis is placed on production rather than instruction.

However, these options to generate additional resources can be implemented successfully only when the external efficiency of the system improves. Students and businesses will only be willing to participate in the financing of a system that shows demonstrable impacts in terms of
efficiency and outcomes. Hence, the first step may involve paying greater emphasis to reforms aimed at enhancing the management of the system and removing impediments for the private sector participation in training.

Resource Allocation

Irrespective of the source or volume of funds, a better method for allocating resources to the training providers is needed. Establishment of a Training Fund could be an important vehicle for doing this. Its main purpose would be to move systems from supply-driven to demand-driven models and for that reason it should include even government contributions. Institutions would not be given funds but would be required to apply for them, ideally in a competitive field. The fund could be best managed by the sort of national training coordination agency discussed earlier.

Even if a Training Fund is not established some of the principles behind its operation could still apply to the allocation of funds. Instead of transferring resources to institutions on an ad hoc basis, public resources could be transferred on the basis of input or output criteria. Institutions could be financed according to the estimated cost of inputs; for example by using norms such as the number of trainees enrolled or number of classes.

An alternative may be to fund institutions based on outputs or outcomes. Output targets can be defined in absolute terms (e.g. number of course completions, pass rates on examinations) or in relative terms (e.g. years to completion). Outcome targets measure the success of training providers in meeting labor market needs (e.g. job placement within a reasonable time). The key is to define transparent criteria that are easily measured but not easily manipulated.

A key element for resource allocation that should be built in over time should be competition for funds. Competition for funds, between public and private providers, will lead to improved institutional performance. Funding needs to be linked to some input or output based criteria and accredited public and private providers should be able to compete for these resources. International evidence is by and large positive in this regard — competition for resources has lead to a reduction in costs for training among competing institutions while also leading to positive labor market outcomes.

The Way Forward: Recent Initiatives of the Government of India

Recognizing that the system is outdated and resembles a closed, centrally planned system for a centrally planned economy, the Central Government is keen to reform the system. The Government is committed to the development of a system where it plays a key role in policy development, standards setting, financing and monitoring and evaluation, while engendering greater competitiveness and accountability by training providers. For reforms to succeed, close involvement of the private sector at all levels — from policymaking to being involved in running institutions, is critical and the Government is working closely with the private sector to move forward in transforming this vision into reality. A National Skills Development Mission has been formed to spearhead the reform process. All ITIs are currently being upgraded into Centers of Excellence, fostering close public-private partnerships, and providing institutions increased administrative and financial autonomy.
References


