



UNEVOC Forum

Is training in developing countries different from training in developed countries?

» Academic schools in the industrialized world are not particularly different from their counterparts in poorer countries. Except in very destitute societies, school buildings look similar and the same is true for classrooms. Curricula and the overall organization of studies tend to follow similar lines. The fundamental difference is in what we cannot see, namely that the students learn a lot more in the richer countries.

What could we say about TVET? Are there the same similarities and differences?

The present essay is an attempt to answer this question. By no means is it the result of a careful and systematic inquiry. The basic approach is deceptively simple-minded: What did I see in my numerous trips, as an officer of the ILO, the World Bank and the Inter-American Development Bank? What has struck my mind as being particularly different, for better or for worse?

1. Many hits, many misses: heterogeneity is the norm

My overall impression is that differences in TVET are far bigger than in academic education. This is the case both in the overall structure and organization of the systems as well as in results.

In developing countries (henceforth, DCs), academic education is a relatively homogeneous and non-descript mass of public schools, offering uninspired education (the exception are the few schools catering to the elites).

However, TVET offers range from the sublime to the totally useless or decrepit.

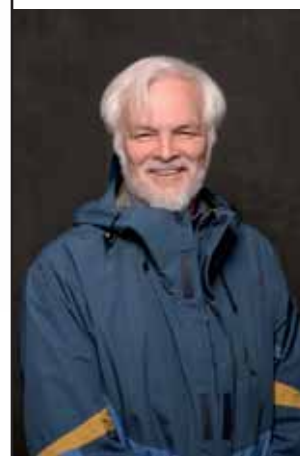
Take Brazil and Argentina. Secondary public schools in Argentina have a long tradition of offering serious education and, despite the ups and downs of the country, they survive with not too many bruises. In contrast, too many Argentinean technical schools are in shambles.

Brazilian public education is mediocre at best. Yet, a few hundred kilometres from the Argentinean border, some of the SENAI vocational schools reach European standards.

In other words, in TVET variance is much greater. Some courses offer excellent preparation for existing jobs. Others miss the target in many different ways, such as no jobs, wrong clientele, wrong preparation, bad quality.

2. Weak targeting, worse correction of fire

Why would TVET schools in DCs miss the target so often, compared to their counterparts in the industrialized world? The first, off-the-cuff answer would be their poor targeting of markets and students. They miss because their aiming devices are poor. Perhaps, however, it seems more plausible to postulate that they lack the mechanisms to correct their targeting after a miss has been registered. Naval artillery rarely hits the first time. What makes it such a formidable weapon is that the miss is used as the information that helps in the correction of fire.



by Claudio de Moura Castro

There is a considerable lack of concern with the fate of the graduates. Schools do not think it is their responsibility to prepare students for real jobs. But can we blame schools individually or are we dealing with a systemic problem where the schools are part of a system with a logic of its own?

Rarely do schools have the mechanisms to trace former students and they make little effort to undertake such efforts. Tracing former graduates is not considered to be their job.

In fact, they tend to do nothing when they find that the training was worthless or mistaken. When students do not get jobs, this is not considered to be their problem. In two Maghreb countries I am familiar with, tracer studies indicated that less than 10% of the graduates found the jobs they were expected to occupy. When confronted with such unsavoury results, principals claimed that this was neither their business nor their fault. But whoever the culprit, they were not at all worried about such misdirected targeting.

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Another chronic infirmity of technical schools, particularly in Latin America, is the mismatch between what students expect and what the schools offer. Many students enrol in secondary-level schools just because is tuition-free public education. They have no interest in the occupations taught or on the corresponding jobs.

Unfortunately, this happens too often in DCs. Principals are not penalized when graduates fail to get the jobs they expected. In contrast, some American vocational programmes make teachers accountable for the jobs obtained by graduates.

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It is a fact that TVET schools often fail to train the right people for the right jobs. Yet, the courses offered are not as bad as the lack of mechanisms for correction. There is considerable expertise and tradition in the operation of TVET. The chief problem is the lack of feedback and accountability. To a large extent, the fault lies with weak governments that fail to create mechanisms for the correction of the course along the way. After all, accountability is not a self-imposed agenda. Governments must make schools accountable for their performance. And this is what they fail to do.

3. The mind and the hand do not learn together

TVET systems in DCs tend to follow two patterns. There are those that are associated with the Education Ministries and tend to be part of academic systems. In other words, they are often packages offering academic and vocational components of courses that issue secondary degrees of different sorts and levels – more often than not, the graduates are called ‘technicians’ (técnicos etc.).

These schools have the *ethos* of academic schools. Typically, their vocational or shop teachers can have two different profiles. They may be ‘instructors’ who are experienced

workers. In this case, they earn less, have lower status and are looked down upon by the white collar teachers. Their blue coveralls are the visual dimension of their stigma. Inevitably, the teachers’ low status lowers the aspirations of the students to pursue the trades they teach. It is a self-defeating formula.

Dozens, if not hundreds, of these schools are the brain-children of the World Bank. Building them was the official gospel of the Bank in the seventies. When a large survey of TVET was commissioned in the late eighties, they were shown to be the least functional modality of

TVET. To the Bank’s credit, there was a ‘*mea culpa*’ and an abrupt change in priorities.

Alternatively, and far more common, the shop teachers are just regular teachers who received an improvised and second-rate training in the vocational subjects. Not being experienced professionals themselves, they cannot give the students a true professional training in whatever trade is being taught.

Lo and behold, academic education may be correct or even good. But the students are poorly trained and unprepared for the labour market. A usual consequence is that they become obvious candidates for higher education. To sum up, they are neither competent in the trades taught nor well equipped to compete in higher education with those students who could dispose of all their time for academic pursuits. Many technical schools in Latin America and Africa belong to this category.

The other extreme case comprises the trade schools, usually sponsored by Labour Ministries or Vocational Training Institutes. They are descendents of apprenticeships or craft schools, originally created to cater to the poor and the orphans. They tend to have decent professionals as instructors, recruiting them in the world of work. However, the complementary education in language, maths, drafting and science tends to be inadequate. Quite often, the students have weak previous schooling and come from a much lower social extraction. Overall, their status is quite low. Yet, they tend to land in jobs that are closer to the trades they learned. Many Asian countries have such schools, including those in the Indian sub-continent. They also exist in Africa and in NGO sponsored programmes in Latin America (they are not the mainstream training solution).

When we apply this dichotomy to developed countries, we may see that the same broad features apply. There are technical courses for the better off students. They may be weaker in shop activities, as is the case of the United States. And there are the trade schools that recruit academically weaker students – many European and Russian schools are in this cate-

gory. However, the differences are not so extreme. The shop activities of the academically strong schools are not so bad. And the theory end of the craft programmes are not so watered down. The 'mind versus hand' gap is less profound and dysfunctional. It is as if the schools of DCs were a caricature of those of developed countries.

4. Poor students, under-funded schools

Just about everywhere, vocational training is the underdog of education, even in industrial economies. But in developing countries, this is much more so.

Training that is attached to the Ministry of Education plays second fiddle to "serious" academic education. It gets the less capable managers and its budgets are squeezed more often. It has less access to the Minister and to the top brass in the bureaucracies.

To wit, 'technical' schools are poorer and worse staffed than the academic secondary programmes in the same bureaucracies. This can be immediately noticed in the school buildings: they are poorer and more derelict. Such differences can be seen, for instance, in Argentina, Brazil (in the case of state schools) and Chile.

In addition, there are thousands of trade schools sponsored by NGOs. In many cases, they offer training of respectable quality. However, they tend to be spartan and operate with very narrow budgets. Paraguay is a good example of a country where the virtual bankruptcy of the official training system lead to the creation of a significant number of well-functioning schools operated by NGOs.

In the former French colonies, the local versions of the Office de la Formation Professionnelle tend to be substantial institutions, with respectable budgets and competent staff. However, the same internal power politics that created under-funded vocational schools in the ministries of education may be repeated inside the offices. The more sophisticated technical courses tend to get the lion's share of the budgets. Often, these are the World Bank funded schools. At the same time, the lower-status trade training is short-changed.

An interesting illustration of that kind of discrimination was observed in two Mahgreb countries, where apprenticeship was offered under programmes carefully designed by the French AFPA (Association nationale pour la Formation Professionnelle des Adultes). These programmes were far more effective in helping students to find internships and jobs, compared to the regular trade schools. Yet, they were vastly under-funded and the imple-

mentation of the French project was never completed. Nobody in the offices paid much attention to them.

A striking exception to this 'poor TVET versus rich academic' disjunction is the network of training systems of Latin America, pioneered by the Brazilian SENAI (National Service of Industrial Learning). Being relatively independent from the government and being funded from a levy on the payroll, most of these institutions are quite robust and affluent.

In fact, they can offer very high quality training and boast well-equipped schools. Yet, some of them, such as the Paraguayan SNPP



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are undergoing serious crisis. The majority is lukewarm. But the five sisters of the Brazilian system operating under this model, the Colombian SENA and the Costa Rica INA, are model institutions, with ample resources to allow them to offer the very best training.

5. The logistics are more vulnerable

An academic school can function with very little in terms of material goods. Variety can be chalk of different colours but the classes can proceed with white chalk alone.

However, the vulnerability of TVET is much greater. The V-belt of the lathe bursts; the supply of electrodes comes to an end: such trivial events can halt the process of training. One cannot become a turner with a lathe that does not turn or learn welding without electrodes. Typical vocational schools may have over one thousand different parts and supplies that need to be replenished or purchased.

Machines need maintenance, otherwise they break down. The longer they go without maintenance, the more serious and expensive the repair.

Last but not least, machines become obsolete. If factories are deploying CNC lathes, the school that prepares turners needs some kind of numerically controlled machines, even if they are not the latest or more expensive models.

And it is well known that developing countries are weak at logistics and maintenance. The problem is compounded by the extra rigidities of the civil service.

Tractors last much longer in Switzerland than in Nigeria, even though Nigerians are much poorer and could least afford the waste. In poorer countries, bureaucratic red tape to buy replacement parts in TVET institutions can be formidable. Maintenance habits are hit and miss and appropriations to maintain and repair are chronically deficient.

In other words, there is a wide gap in habits of maintenance, repair and procurement practices between advanced and less advanced countries. And these same differences reappear in TVET and hit them very hard.

6. The ever elusive informal sector

The informal sector in most DCs is quite vast – in fact, often bigger than the formal sector. When most training systems were conceived and created, the informal was considered to be a dwindling sector, doomed to disappear with progress and modernity. Whether progress took hold is something to be argued. But the fact of the matter is that the informal sector grew explosively in practically all DCs. In some African countries, it comprises over three

fourths of the labour force and no serious observer believes that this situation will change in the foreseeable future.

Most training systems were modelled after institutions of the industrialized world, where the informal sector is residual or non-existent. Yet, in DCs it took long to realize that the informal sector was not going to disappear. Under those mindsets, the training institutions took shape in ways and modes that were appropriate to train for the formal sector. The training is geared to modern industry, with relatively sophisticated machinery and extended division of labour. Inevitably, it is costly and rigid.

For over three decades, Latin American systems have struggled with attempts to retool their training systems, in order to cater to the informal sector. Some observers believe that nowhere in the world were there more experiments and new schemes to cater to the informal. Unfortunately, not much has been achieved in this direction. As a result, countries with large informal sectors are in a bleak predicament. Their graduates have difficulties in finding jobs in the modern sector and the TVET systems have difficulties in converting their traditional courses to the informal sector.

7. One-stop training for all

Training institutions in the industrialized world were created to offer high standards of preparation for the youth coming out of academic schools – at whatever level this happened. They were pre-service training institutions and they held tight to their original mandates. This is true in just about every European country.

But, on occasion, unemployment went up and workers had to be retrained. Even more importantly, the pace of technological change increased and workers needed additional training. The European tendency was to create new institutions to deal with adults, in-service training and with the unemployed. The French AFPA and the network of training institutions associated with the German Labour Ministry are clear examples of that.

By contrast, in DCs, another path was more often taken. The same institutions that trained youth were asked to retrain the unemployed and to supplement the preparation of adult workers. In that sense, there is a significant gain in efficiency, as expensive staff and equipment are better deployed.

For instance, one can walk into a welding school and find semi-literate workers learning the basics of arc-welding in a work station. A job in a back-road welding shop may await

them. Technicians may be learning about new methods of MIG or gas welding in another work station. Engineers may be found in another classroom, studying quality control methods in welding. Post-graduate courses for engineers may be taking place, where they learn about x-ray techniques to detect invisible cracks in steel casts. Finally, the school may have contracts with insurance companies to determine the causes for the failure of a critical part that provoked an accident.

This is clearly an area in which the DCs are ahead of the industrialized countries. There is much more efficiency and cross-fertilization in this one-stop formula.

8. Conclusions?

TVET systems in DCs are transplants and adaptations from a few industrialized countries. There is nothing wrong with it. In fact, industrialized countries also copy freely from one another.

As we know, all institutional solutions are compromises. You gain here, but lose there. You get more efficiency, but equity loses. You facilitate entry to higher levels of education, but you end up losing in the preparation for the labour market.

Ideally, countries could freely choose the models they want to import. In practice, the model comes with the country that offers technical cooperation. In theory, international agencies, such as UNESCO, ILO and the bilateral banks are neutral. In practice, they are influenced by national practices.

Germans spent several decades trying to export their famous 'dual system'. They also preferred to support individual institutions, by sending there highly experienced instructors. UNESCO liked the technical schools, very much along the lines of the French system. The World Bank, with a large contingent of American officers, has had a special preference for comprehensive high schools, even though, where tried, they turned out to be unmitigated failures. Brazil, in several projects to support training in other countries, reproduced there the SENAI model.

There is nothing intrinsically wrong with most of these models. In fact, some of them have been highly successful. What has to be kept in mind is the fact that the degrees of freedom of the recipient country fall precipitously when they choose the organization that will provide technical cooperation. Such organizations tend to be stuck with their own models. And all models are not appropriate to all circumstances.



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It seems as if the copies and the copies of the copies tend to exaggerate the weaknesses of the original and lose some of their strengths. TVET in poorer countries suffers from weaker governance. The vulnerabilities in the countries where the solutions were created reappear, but enhanced by institutional fragilities. For instance, the original French technical schools were good in the academics but had relatively weak links with the labour market. Where this solution was adopted, the academics may survive, but the complete lack of connections with the world of work is striking.

The purpose of the present essay was to underline differences, not pass overall judgments on the soundness of TVET in developing countries. Predictably, training in these countries has more problems and weaknesses. However, there is also much that is sound and socially beneficial.

What is in the future? TVET has had ups and downs along the last several decades. International and bilateral agencies love it and then hate it. In the nineties, it went down, in terms of international loans. The reverberations of these tides hit countries that, in addition, have their own fashions and oscillations. For those reasons, it seems pointless to try to guess what is going to be the next move.