



DO TRAINING INSTITUTIONS LEARN FROM EXPERIENCE?

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ACRONYMS

AFPA	French National Association for Adult Vocational Training
BIBB	German Federal Institute for Vocational Education and Training
IDB	Interamerican Development Bank
ILO	International Labour Organisation
INACAP	Institute for Vocational and Technical Training in Chile
SENAI	Brazilian National Service of Industrial Apprenticeship
USAID	United States Agency for International Development
WB	World Bank

Introduction

Individuals learn from experience. That is taken for granted. But we also observe that, sometimes, they do not learn. Or else, they may learn and fail to use their learning to change their attitudes and behavior.

What about organizations? What about skills-development organizations? This essay speculates on organizational learning and, in particular, policy learning. Perhaps at the risk of being unduly naïve, it seems to me that their learning is not very different from what has been observed about individuals. Sometimes organizations learn. Sometimes they don't. Sometimes they use their acquired knowledge, but this is not always so.

Organizations are made up of people. But inside organizations, they develop their own values, rules and systems of incentives. In addition, they structure their responses to the outside world. The challenge of this essay is to make sense out of this web of interests, prizes, penalties, habits and inertia that may drive the impulse to learn. Also to be considered is the individual creativity and the organizational climates that stifle or stimulate learning. Indeed, if those involved in a process do not reflect critically on what is being done, the chances of learning are minimal.

The paper will present a number of concrete cases of policy learning and non-learning. They were not selected randomly or by any other "scientific method". Instead, they reflect the past experience of the author, working for the International Labor Office (ILO), the World Bank (WB) and the Interamerican Development Bank (IDB).

In some cases, I focus on the learning that takes place within multinational agencies. In others, learning inside national training institutions is examined.

As the concluding chapter will show, there is logic to the system. But no single and simple pattern emerges.

1. DO TRAINING INSTITUTIONS LEARN? SOME CASE STUDIES ¹

Presented below is a collection of case studies on national training centers, bilateral agencies and multilateral institutions. There has been no systematic attempt to fully document the cases with references or footnotes, as they merely illustrate usual situations.

¹ The author is currently the President of the Consultative Board of the Pitágoras Educational System, in Brazil. He is aware of the fact that the expression "skills development" now replaces older terms such as "vocational education", "vocational training" and others. However, since this is a historical paper, the older terms that were current at the time are often used.

1.1. The holy German Dual System

The following joke circulated in the German training circles, several years ago. Three training experts were caught by African cannibals and were ready to be put in a huge caldron. But the chief decided to grant them a last request. The British expert wanted to have a scotch before being cooked. The French wanted to drink a “grand cru” and sing the Marseillaise. The German training expert wanted to give a last talk, defending the Dual System. What is even more revealing about the joke is the fact that it was told to a large public by the former president of the BIBB, the central training agency of that country.

Respected observers believe that the Germanic system of apprenticeship represents the ultimate perfection in skills development. It functions very well in the three German-speaking countries. Therefore, it is not surprising to learn that German cooperation has relentlessly tried to export it to developing countries.

For several decades, attempts have been made to implement Dual Systems in all continents. Latin America and Africa have received many German programs to replicate the model. As the joke suggests, when German trainers meet, there will always be at least one vehement advocate for it.

As the historical records shows, the results are predictable. After a serious German project is germanically set up, everything seems to be in place. One incredibly competent and experienced trainer comes along and the program starts. The results tend to be adequate or even very good.

Yet, the program remains minuscule. Even after decades of operation, it fails to grow or to be replicated. Or, it is altogether abandoned. The seeds of the Dual System do not bloom into broad and successful training programs.

And the reasons are well known. It is far too complicated and too difficult to manage for most countries, including European nations. It requires the harmonious cooperation of too many institutions. Labor Unions must work side by side with trade associations (which hardly exist in many countries) or with employer’s associations. Some of these institutions are not on speaking terms with one another. It also requires Labor and Education Ministries to cooperate, another difficult proposition.

Klaus Schaack explains the utter complexity of these institutional arrangements in terms of post-World War II policies ². Fear of a resurgence of authoritarian governments in Germany lead to policies that serve to dilute the power of any individual branch of the government, by means of many checks and balances. In other words, the institutional arrangements of the Dual System are indeed meant to be intricate and there are reasons for that. The rationale was not to give excessive power to any one institution.

Despite that, it works well in Germany. However, when exported, the institutional and bureaucratic burden becomes overwhelming. Local clones wilt under its weight.

² Klaus Schaack, *Why do German Companies Invest in Apprenticeships* (Berlin: Klaus Schwartz Verlag, 2008).

In addition, the system depends heavily on the “Meister” who is a regular employee of the firm where apprentices work, acting as a teacher and guide. Most firms in other countries do not have a lavish supply of highly skilled workers who are also competent at teaching apprentices.

What is surprising to realize is for how long German cooperation tried to recreate Dual Systems in developing countries, despite its mediocre results. The strong-willed advocates are still around, making eloquent speeches in its favor – hence the joke mentioned above. Granted, in the last decade, policy guidelines from German Cooperation agencies have tuned down or altogether abandoned this path.

But perhaps, even more surprising is the realization that few if any attempts were made to prune down the excessive complications and to develop a much simpler version of apprenticeship. Also surprising, why not try to export the “Berufakademien” that are equally complicated but cater to higher education students? In this modality of apprenticeship, small numbers do not hurt, since enrollments in higher education are always modest, representing a tiny proportion of the total number of skilled workers.

The inflexibility of the Dual System stands as a solid example of non-learning by high-level and competent institutions in a country known for its scholarship and technical prowess. I do not have the inside knowledge of German institutions to venture a good hypothesis to explain why it took so long to realize that it was not exportable. Perhaps, the German institutions in charge of skills development abroad were oversupplied with former “Meisters” and apprentices. If that is the case, technical *ethos* is prevailing over the public-policy logic.

1.2. The French national association for adult vocational training exports “alternance training”

French training is typically institution-based. Technical Lycées, CAP programs³ and many others take place in schools. The few apprenticeship programs that prepare young workers tend to be housed in the German firms that operate in French territory. Or, they are in the construction trades, following the medieval traditions of the “Compagnons du Devoir”.

However, France has a different institution that has a mandate to deal with the unemployed: the national association for adult vocational training (AFPA). In addition to its domestic activities, the AFPA engages in cooperation, particularly to support former French colonies.

I had a chance to visit two AFPA apprenticeship programs, implemented in Algeria and Tunisia (these visits were complemented by discussions at AFPA headquarters, in Paris)⁴. In contrast to the French tradition of school-based programs, these two

³ The “Certificat d’Aptitude Professionnelle” (CAP) is a vocational diploma at the secondary education level.

⁴ Claudio M. Castro, "Algeria: Training for Jobs or Training to Keep the Youth out of the Streets". 1993. Claudio M Castro, "Training in Tunisia." 1994.

programs follow the classic formula of signing up young apprentices in participating firms and complementing their work experience with classroom activities. Therefore, they are much closer to the German apprenticeships, but much less ambitious.

The AFPA training materials in Tunisia were simple and intelligent. They were also in tune with the low level of schooling among the apprentices (I never saw the Algerian materials).

In both cases, their subsequent employability was excellent. In Algeria, around two thirds of the graduates remained employed after the end of the apprenticeship contract. This contrasts with over 90% of the graduates of regular training institutions who cannot get a job in the formal sector. By this standard alone, it was a vastly successful program.

Yet, in both countries, it was poorly implemented and looked down upon by the authorities of the “Office de la Formation Professionnelle” in each country. In the Tunisian program, the classroom activities were never seriously implemented, as the program run short of funds. The authorities never liked it and did not hide their prejudice.

The Algerian program was equally treated with little respect and insufficient funds. Like in Tunisia, the high employability of the graduates failed to impress authorities.

AFPA did its homework, adapting European apprenticeships to the realities of Maghreb countries. But the otherwise competent local training offices could not disentangle themselves from the regular French training models that they accepted without an eye blink – even the names of the institutions are copied from those in France.

In France, to get away from the classroom formulae, a different institution was created (AFPA). But the French “modèle d’alternance” landed inside an institution completely sold on the French classroom model. The two cultures did not blend.

Another possible explanation for the failure to realize that these were excellent programs has to do with status distribution within institutions. It has been again and again observed that programs that cater to low status students have themselves a low status within their host institutions. We all know that, within Ministries of Education, primary education seems always to be short-changed, *vis-à-vis* higher education. The same seemed to occur with the apprenticeship programs inside the Tunisian and Algerian “Offices de la Formation”. These apprenticeships cater to the poorest students. Officers complained of their low educability (but forgot to consider that they got jobs and the others did not).

Another part of the problem has to do with external constituencies. The “Office de la Formation” offers technical schools and other programs catering to higher status students. From the visits, it was clear that these courses got much more attention from the management – and certainly, much more money.

Be that as it may, it is easy to conclude that France learned its sociological lesson, creating an independent AFPA. This institution also learned its lesson, adapting its

programs to local conditions in Maghreb countries. However, having landed inside institutions polarized by classroom-based instruction and catering mostly to somewhat higher-status students, the apprenticeship programs suffered, despite being more successful than the others. This is a clear case of not learning from experience. Or perhaps, not wanting to learn from experience.

1.3. How multilateral banks learn and teach (preach?)

Since the present paper presents cases from two multilateral banks, the WB and the IDB, it might be worth mentioning how they work. Let us begin by explaining how they strike a deal with borrowing countries to develop this or that project. This is relevant to the present issues since negotiations involve a good deal of exchanges of experience and knowledge.

First of all, it is always pertinent to remind the readers that banks lend money. They don't grant money, other than on a minute scale. Therefore, countries must decide whether they want to borrow and for what sector of the economy.

In the last several years, there has been more money available in the banks than interest or financial capability among prospective borrowing countries . Therefore, bank officers try to peddle loans for projects conducted by their own departments. In addition, banks compete with one another. Mind you, this is formally against explicit rules. Officers are not supposed to offer loans. Yet, this is exactly what they do, in a discrete way, in conversations with the higher ups of the corresponding Ministry. They try to scan the perceived needs of the Ministry, suggesting possibilities to develop loans to address these needs.

There is a significant element of learning involved in these multiple exchanges. The bank officers offer a menu of suggestions that are inspired by what other countries may be doing. These conversations can have a high educational content, since the bank officers are exposed to best practices from all around the world. In addition, if there is sufficient interest in the propositions, seminars and study visits can be promoted. These are valuable opportunities for local staff to educate themselves in state-of-the-art thinking about different subjects. Even if the loans do not materialize, such exchanges open a window of opportunity for learning by people who otherwise have relatively restricted access to the international experience.

When banks promote these study visits, lectures and workshops for the local staff, they expect the lessons to be quickly learned, so that everybody can get busy on project preparation. Bank officials become impatient and frustrated when all the preaching fails to convince the local counterparts. But learning and being convinced of new ideas is a proposition that can take a long time to brew. The same French WB officer who blames his local counterparts for inertia, forgets that the French University Reform, proposed in 1968, still has not taken place.

Low and behold, sometimes ten years later, the ideas become ripe for implementation. This is what happened with the health reforms proposed by the WB for Latin America. Ten years after the first discussions, Colombia reformed its health system and other countries soon followed. In other words, perhaps the most profound lessons

taught by multilateral banks take a long time to percolate into society and government bureaucracy. But this frustrates the bank professionals who have tight agendas and targets.

Such exchanges can also provide precious insights for the bank officers. They are offered a chance to understand the local scene, the constraints, the political environment and many other important tidbits of information. Just as important for the success of the loan, is getting to know the people dealing with the project or in the power structure of the Ministry.

As a broad generalization, the education facts tend to be well understood. These are lessons well learned. But the political and institutional environment is often overlooked. This was more noticeable in the past, but remains a lesson not fully learned.

If negotiations for a loan obtain a green light, project preparation begins. On average, it takes about four hundred thousand dollars and at least one year to get a project ready for approval by the bank and the borrower. Part of the expenditures goes to the detailed planning that is required. But a very sizeable chunk goes to study the sector that will receive the loan. Banks engage their own staff and hire high-level consultants to study specific aspects. We can say with confidence that the sector studies that precede the loans tend to be the best and the most accurate appraisals of the sector. Authors are quite careful with the numbers and the results present a quite balanced view of the situation. This is learning at its best.

Where the sector loans tend to be weaker is on appraising the probability of implementation of the loan. Evaluation of political and institutional constraints is much weaker than the technical studies of the sector. This is where the projects get stuck.

Morocco gained a loan for its “Office de la Formation Professionnelle“ in order to create a network of technical schools. I visited some of them, towards the end of the loan and they were faultless, both in terms of their facilities and in the way they operate – very close to the market. However, the loan also included a provision by which the Office was due to set aside a fraction of its budget to fund private training institutions. This was an imposition of the WB. The minimal chances of implementing this provision could have been easily predicted by anyone familiar with the local environment. Authorities of the Office would never cut their own activities to spare resources to fund private institutions. This is a good example of non-learning by the bank project officers. As shown all along the paper, learning and non-learning occur in tandem in bank activities.

1.4. The World Bank and its Comprehensive High Schools

In the 1960s and 1970s, the World Bank was infatuated with the American-inspired Comprehensive High Schools. In the United States, this model was implemented in the early years of the twentieth century. It was the American formula to offer high school and vocational training under the same roof and within the same organization.

This is not the place to pass final judgment on the success or failure of Comprehensive schools in the United States. Suffice to say that no European country adopted the model of a single school for all youth of secondary-school age. It also seems to be a consensus in the United States that, in most schools, the vocational training imparted was amateurish and did not prepare students for the world of work. In fact, the rapid development of Community Colleges can be interpreted as a failure of the Comprehensive High School model.

None of this deterred the World Bank from trying to lend money for its replication abroad. In that sense, the American model was accepted without considering its shortcomings at home. Indeed, this is an episode of little learning by the WB.

In the early 1970s, I was in my office at the Brazilian Planning Ministry when a World Bank officer came over, extolling the virtues of the Comprehensive model and proposing its implementation in Brazil. On top of my desk, I had tabulations from a survey of secondary students. They essentially said that students from schools of this genre were not at all interested in the vocational or technical courses that were being offered. In fact, the survey showed that only around 1% of the students would consider taking up a job in the area for which they were being prepared – in addition to receiving a secondary education.

I showed the tables to the eloquent WB officer. But they did not seem to convince him.

Wherever they were built, these schools failed to prepare graduates who would take up the jobs for which they were being prepared. The reasons were and are very simple. Those students who get far enough to finish a respectable-quality secondary education prefer to try their luck in higher education, rather than take up jobs of a much lower status – for which they were prepared. In other words, the economic and symbolic value of a high school diploma is higher than the value of the technical skills.

But it is even worse than that. The WB schools were built and equipped with the highest possible level of sophistication and provided with well-paid teachers. As public schools, they do not charge tuition. Therefore, entering the schools became very competitive: who doesn't want to get into an excellent school that is also free? The end result is inevitable. They become schools for the elite, because the academic entrance tests favor students from high economic and social status who had access to the best primary schools and the cultural capital of their home environment.

Brazil had its network of junior secondary schools, inspired and funded by USAID. It also has a significant network of federal technical schools, all of them very elitist. Colombia had its INEMs, patterned after the same model. Students put up with the nuisance of the shop classes, as long as these schools help them in passing the tests needed for the most desirable higher education courses.

When the WB was preparing its Policy Paper on Vocational Education, in the late 1980s, it commissioned a large number of papers, trying to find out what works and what does not work. The results were quite striking, vocationalization of secondary education and comprehensive schools were the least successful. The reasons are those

mentioned above and known to many practitioners. This was the end of this model for the WB, as far as new projects were concerned.

The WB operational departments never learned their lesson, even though they were supposed to be following up on their projects. However, the Policy Paper was merciless against such schools and signed their death sentence. Checks and balances worked.

1.5. IDB training: new projects ideas and administrative stalemate

The IDB funded a significant number of skills-development projects, for many years. Some of them were high-school level technical schools. But it also funded many training institutions offering training detached from formal education. Indeed, this kind of training is the hallmark of the Latin American systems of skills development.

When I was working for the IDB, with Aimee Verdisco, we prepared a paper looking at all training projects⁵. We wanted to see to what extent a training project learned from the previous one (not necessarily in the same country, but project officers are roughly the same and talk to one another).

Our goal was to analyse projects in order to offer lessons learned for the following years. After all, loans are complex operations, with hundreds of details that can go wrong. And they do go wrong more often than Banks are willing to admit. With all the reviews and field visits, perceptive professionals should find much in projects that is less than adequate or altogether wrong.

We looked at all education and training projects ever supported by the IDB. From this universe, we selected the training projects. Looking at them, it was possible to classify into three categories: technical education, training centers, and the projects targeted to unemployed youth.

What came out of our review was clear enough to delineate a pattern. In fact, it was a double pattern. This is what makes this case very curious.

Project design, to a significant degree, incorporated learning from previous experience. It eliminated elements that were problematic and introduced new ideas that were gathered along the way. In contrast, little was learned to improve the loans at the implementation stage. Let us look first at design.

After the creation of the Brazilian SENAI, a long string of loans to fund similar institutions was signed with Brazil and other countries. These were highly successful projects, for quite a while. Subsequently, they became slow and fat, losing their ability to target courses to real jobs. Showing good judgment, the IDB abandoned this line. Much later, there was institutional reform in many institutions and new methods devised to bring training closer to markets. The IDB, again, funded projects of this nature.

⁵ Claudio de Moura Castro and Aimee Verdisco, "Monitoring Training Projects: A phylogenetic approach", Interamerican Development Bank (September, 2000) unpublished.

Technical schools had a similar cycle of initial successes and failure to perform. As problems were clearly identified and corrected, the IDB again funded them.

The first program targeting unemployed youth was “Chile Joven”. In view of its success in developing a decentralized and self-correcting mechanism for targeting training to jobs, it was replicated in Argentina, Peru and Uruguay. As fresh loans reproduced the model, corrections were applied. For instance, in the Argentine replication of “Chile Joven”, an internship instead of a job was required in order to fund training providers. This is because unemployment was too high and it would not have been realistic to expect job offers before the start of training.

All in all, these were good examples of policy learning. Each subsequent project was corrected based on the perceived faults of the previous.

However, the same cannot be said of the implementation of the loans. Unavoidably, implementation of multilateral bank projects is riddled with traps, dead ends, inefficiencies, delays and all sorts of unsavory accidents. In contrast to the vociferous critics of multilateral banks who scream against imperialism and ideology, to my understanding and that of many others, this is not where the problems are. The real shortcomings of the banks are in implementation. Everything can go wrong. And everything does go wrong. Projects planned to fully disburse in four years may be still alive a dozen years later. Very few disburse within the prescribed time.

Problems abound. Congress may take forever to approve the loan. Counterpart funds may not materialize, bringing the project to a halt. Ideological or conservative forces, inside and outside the Ministries, may be fighting for reforms. Bidding for contracts may get stuck in legal controversies. Once these major barriers are overcome, the everyday hurdles continue to hurt and delay the project.

Weak institutions are unable to handle the complexity of the bureaucratic procedures. Yet, we observed a chronic failure to appraise the ability of the local staff to implement the loan. Time and again, very demanding reforms were included as part of the projected activities, without a serious effort to gauge the political will to implement them or the administrative competence to handle the complexities prescribed in the loan document.

Repeatedly, training was seen as an antidote to weak administration and significant funds were allocated to that. Low and behold, enough evidence is available, showing that training does not strengthen institutions. Training helps when everything else is moving in the right direction. The unavoidable result is that the training component of loans is not taken seriously and often it is not seriously implemented. This was shown to be the case in the World Bank and less reliable evidence suggests that the same is true in the IDB

Tendering and contracting procedures are unbelievably complicated. The same with the control procedures to ascertain that the funds are being properly used. Countries that are in dire need of the loan funds waste an enormous amount of time with Byzantine rites.

Given the weaknesses of the Ministries in administering the loan, there is a standard practice of creating “executing agencies” to obtain efficiency and expedite implementation. But there is mounting evidence that these units create more problems than they solve. There is a stalemate in the thinking about them and few promising alternatives.

Low and behold, every new loan repeats the procedures that all experienced officers know, for sure, to bring troubles or delays. Very little changes in the administrative routines. And, more than likely, whatever changes occur are not because accumulated experience suggests the need for repair. It is usually the result of new – and often inexperienced – people taking over the management of some area of the bank.

In other words, there is no policy learning at the implementation stage. This might look like a too radical simplification. But it is my contention that it is not. Banks do not learn at the implementation stage. Two hypotheses can explain what happens with administrative routines. Either the bank does not learn from past experience or it learns but takes no action. Which one is closer to the truth?

It would be pretentious on my part to offer an answer to a chronic deficiency among multilateral banks. However, I can speculate on some organizational issues inside the banks.

Project officers have, most of the time, a serious research background. They have been educated to ask questions, to probe for results. They have the right mindset to be part of learning organizations. And indeed, perhaps a bit less than possible, they improve the design of new loans, as a result of their experience with previous ones.

They also produce piercing analysis of everything that is wrong in the borrowing countries. And they have plenty of medicines to cure the ills denounced.

However, when it comes to their own bureaucracy, the story is different. Procedures are created and perpetuated by bureaucrats who are not speculative spirits. They want to play it safe as well as protect their turf and peace of mind. If it takes longer, three times as long, it doesn't matter, provided that the little bureaucrat is protected from the accusations of lack of oversight, petty corruption or arbitrary decisions, either on his part or on the territory he is expected to control. They do not maximize economic development, efficiency or whatever. They maximize their own safety and comfort inside the bureaucracy.

Technically-minded project officers feel helpless in front of a perverse machinery they barely understand – at least, that was my case. They don't dare to challenge the old-time bureaucrats who can make them trip the next day on some arcane internal rule. Worse, they are aware of the intricate network of petty officers that can send to bureaucratic hell those naïve professionals who dare to challenge the set routines. In my own trajectory inside the IDB, twice I fell into such traps and had the most unpleasant experiences, facing the ugly side of a punitive bureaucracy. Both times, I wanted to move quicker and did not have the patience to wait for the proper procedures.

In favor of multilateral banks, it must be stressed that, periodically, they perform self-evaluations and these can be severe and scathing. In the case of the research I authored, mentioned to above, the staff did not like what they read. However, the piece was not censored or suppressed. Of course, nobody was very eager to circulate it widely.

This entire issue brings to the forefront internal motivations and incentive systems. Why would the banks want to evaluate their own performance in this or that aspect, considering all the pain and embarrassment that it brings?

One powerful reason is that the banks feel pressured or obliged to have such mechanisms in place. If nothing else, they need to give satisfaction to the external and vociferous critics. But then what?

Given the results of the periodical evaluations, often quite fierce, what does the bureaucracy do with them? Designing new projects, with new ideas hurts nobody inside the bank. In fact, it enhances the reputation of the bank as innovative and at the leading edge of new trends. Therefore, there is considerable learning and the acquired knowledge tends to be put to good use.

However, who gains by trying to change administrative procedures? Negative reactions tend to be powerful, albeit discrete. But they are not less powerful for that. Managers, some times, collide with smaller bureaucrats who fear any change, particularly those moves that bring risks to their small territory. And these little fellows know how to make unpleasant the life of those who dare to encroach on their territory. The possible gains from improving bureaucracy are overshadowed by the losses resulting from clashes inside the administration. Hence, organizations are not good at learning about problems concerning their internal administrative procedures. This is true everywhere, not only in skills development.

An uncomfortable or demolishing evaluation is quietly ignored. Or, the initial moves to change wear out, to everybody's relief. Learning, yes, but not much is done to correct course.

1.6. Is SENAI a learning organization?

The Brazilian SENAI is the oldest of the Latin American training institutions, created in the early 1940s. Its original model was remarkably innovative, showing a great instinct to learn from other countries.

From its origin in São Paulo, it spread to all Brazilian States. In addition to the original SENAI that focused on manufacturing trades, other parallel institutions were created, to cater to the service sector, rural areas, transportation and small enterprises. The model was soon replicated in almost all Latin American countries.

Therefore, it offers ample grounds for inquiry into issues of learning or not learning from experience. As will be shown, it offers good examples of learning and also those in which no learning took place or where errors persisted.

During World War II, Brazilian manufacturing was booming, as a result of restrictions on imported goods. But the education system was in terrible shape and no significant vocational training existed. The Ministry of Education proposed the creation of its own network of vocational schools. However, Brazilian industrialists were not comfortable with the idea and offered to create a system of their own, but funded with public monies.

This was a revolutionary idea. Indeed, Brazil is the only country adopting this solution of private training with public funds (only much later, Chile adopted this model with limited scope). Despite the opposition, the strong-willed President of the country accepted the scheme proposed by industrialists. SENAI was born, initially in the State of São Paulo, where industry was strongest. A Swiss mechanical engineer was appointed as its first executive. Given his previous position as a training supervisor for a local railroad, he brought along an old idea developed in the nineteenth century for the Russian railroads. This was called “methodical series” and consists of practical projects going from the very simple to the more complex. In each module, a new skill is introduced and the previous ones are reinforced. This sequence of projects then constitutes the whole program.

SENAI developed this idea much beyond its original Russian conception. Skills such as reading and writing, blueprint reading, applied mathematics, physics, and technological information were built seamlessly into each module, also following the rule of increasing complexity. Therefore, the program has no curricular grid, just a sequence of projects. Everything merges smoothly within the routine of preparing and working on the sequence of projects. When an apprentice finishes all the practical projects, he or she gains a certificate and is ready to work in the occupation learned. No further tests are required, since each project has its own minimum performance levels established. To move to the next, the apprentice has to complete this level.

Looking at this method in light of current theories of learning, it remains state-of-the-art. It is still better than anything else available, as it allows for the seamless integration of different spheres of knowledge and it goes from concrete to abstract.

A third innovative element was the use of a 1% levy on the payroll, in order to finance SENAI. In other words, it brings the advantage of private training close to the needs of industry, as well as the benefits from public funding. And it avoids the budget battles in Congress, since the budget is defined simply as this 1%.

Altogether, SENAI put together a very substantial set of innovations, setting Brazil ahead of just about any other country of equivalent economic development at that time. It was born as a solid learning organization, since it learned many lessons from different sources and improved on them. Subsequently, every Brazilian State created its own SENAI, as an exact copy of the original from São Paulo.

From the beginning, this classroom formula of methodical series shared the floor with apprenticeships schemes. The latter was a soft or light Dual System. Twice a week, in the mornings, young apprentices with a work contract in factories would attend classes in Portuguese, mathematics, drafting, etc.

While no rigorous evaluations of this system are available, it seemed to work fine. However, it progressively lost speed and little of it is left today. It seems to me that the main culprit is the inability of those in charge of labor laws to understand both the logic of markets and the issue of age. An inflated pro-apprentice bias progressively eliminated the incentives for firms to hire apprentices. And a 14-18 years of age window for apprenticeship lost touch with reality. SENAI is not guilty here. The problem lies with “bleeding heart” attitudes on the part of legislators and staff of the Labor Ministry. Wrong learning.

In the 1970s, the SENAI from Rio de Janeiro came up with a significant innovation. It fully kept the methodical series concept. But instead of having students progressing lockstep, it created individualized trajectories. Each apprentice moved at his own pace, going from classroom, to drafting room and to shop, according to his learning speed. No more dead time for vacations, no idle capacity in workshops due to some students dropping out. Workshops that had remained vacant because of group vacation periods or because of students dropping out of courses were therefore able to operate at full capacity, with rotating students.

All evaluations indicated that this was a meaningful innovation. The system was efficient, as it turned out more students and cost less. It had all it takes to be replicated elsewhere, as the original São Paulo model had been. However, this did not happen. I could never get the full story. However, it seems that this innovation took place at a moment when the State of Rio de Janeiro had lost much of its industrial leadership. It never managed to sell its solution to São Paulo, with its powerful SENAI (with close to half of the total enrollment in the country). As the industry of Rio lost more and more weight, the individualized-instruction model wilted. In so many words, little guys do not impose solutions on the big guys, no matter how good these solutions might be. This is a case of foregone learning.

In the 1990s, a very bizarre development took place. With the growth of the Brazilian graduate schools of education, SENAI acquired a rambunctious group of critics. Belonging to industrialists and being funded with tax money was anathema to those people who espoused leftist ideals. To protect itself against such boisterous critics, SENAI started hiring graduates and post-graduates from education schools. It also believed that these individuals could bring significant improvements to the quality of instruction.

To my understanding, this was a gross mistake. These educators brought in the Brazilian (bastardized) version of constructivism. They are adamantly against textbooks, handouts, or step-by-step and structured materials. Since they claim that students “construct their own knowledge” and each constructs it differently, materials should be tailor-made for them. Hence, teachers must develop their own materials. We all know that this is a receipt for disaster. It brings permanent improvisation. Piaget is the intellectual father of this group but he cannot be considered guilty of endorsing such silly ideas.

Skills development is an area with abundant teaching materials of high quality. They are highly structured and can be used by millions of students. But as a result of this “Fifth Column” inside the SENAI, the methodical series were criticized and ridiculed. They were accused of being mind-numbing and Skinnerian.

The early methodical series were conceived for students enrolling with four years of schooling. Granted, they were a bit narrow. But this is not an intrinsic shortcoming, just a sign that most of them needed updating. São Paulo resisted the pressure to dump them and is presently producing some splendid new versions of the methodical series. But most other States were prey to this childish criticism against structured materials. The results are quite clear. The degree of improvisation in the classroom increased dramatically.

This is the opposite of organization learning. It is unlearning at its worst.

SENAI not only expanded to other States, but it also led to the creation of similar institutions in the service sector, agriculture, etc. Two of them were plain clones (e.g. SENAC for the service sector and SENAT for transportation). However, another two were created differently. SENAR (for agriculture) dropped the idea of being a private entity and was created as an institution directly managed by the government. The same was the case with SEBRAE (for small firms). In both cases, one of the most revolutionary aspects of SENAI was abandoned. Not by coincidence, both became horrendous public bureaucracies.

This was the wrong policy learning on the part of the Labor Ministry. SENAR and SEBRAE failed to copy the good things. Compared to the other siblings, the shortcomings of the two public institutions were so gross that, subsequently, the government went back and privatized them. This time, we see sound policy learning on the part of the federal government. Both institutions improved dramatically.

SENAI was created at the heart of the Brazilian manufacturing center. Not only that, but São Paulo kept up with technological advances and SENAI had to become increasingly sophisticated in its offerings. From an early start preparing machinists and electricians, it now trains technicians in robotics and even offers post-graduate courses to engineers. It also does quite well in R&D projects and technical consulting to industry.

But as it migrated to less industrialized States, São Paulo remained as the model. Therefore, there is always the risk of copying solutions that are not so well suited to different contexts. There is not enough research on this topic. My own first hand impression is that the SENAI of less industrial States offer courses that are more expensive than necessary. They also fail to fine-tune the programs to the needs of very small shops, where the graduates will work or even be the owners.

However, in the last decades, some progress along these lines has been achieved. One remarkable innovation is mobile training. Let us take as an example the town of Sobral, far in the interior of the poor state of Ceará. There is a SENAI outpost there. It consists of a significant parking lot, a director, a salesman and a secretary. The salesman cruises through the nearby towns, trying to convince mayors or businessmen to buy SENAI courses or industrial consulting services. Those who want courses have to pay part of the running costs and offer space for the installation of the shops, as well as lodging for the instructors. When comes the time, a truck delivers a huge metal box that unfolds to display a full workshop for the chosen trade. The courses may last weeks or months. Afterwards, the trucks pick up the crates and carry them to

the next location. For towns that need consultants to set up or revamp business, the SENAI salesman will locate someone from a list.

Mobile training has existed for a long time. But as time goes by, the solutions improve and past hitches are eliminated. Again, this is a good example of learning organizations. The development of those unfolding and folding boxes for each occupation is a fine example of technical innovation. In a couple of hours, a complete workshop is ready to go. It is not mobile training. Rather, it is transportable training, a much cheaper solution, compared to adapted buses or trailers that are more expensive than the workshops they carry. This is a case of continuous learning over several decades.

Two countries in Latin America did not imitate the SENAI model. One was Mexico, being too close to American styles. The other was Argentina, at the time, much ahead of Brazil in just about every dimension of development. By contrast, all the others copied the SENAI model.

The decision to export the SENAI model was not a planned exercise in international cooperation. Instead, it was a chance event. One of the top administrators of SENAI lost his political clout to a new tribe of high-end bureaucrats. Being dumped from power, the best he could do was to obtain support from the ILO and go about to duplicate SENAI in other Latin American countries. His first stop was Colombia where SENA was created. The second was Costa Rica, where he helped to establish INA. Together with SENAI, these two became the leading training institutions in Latin America. Other similar institutions followed suit in several countries.

Yet, they all made the same mistake as the original SENAR and SEBRAE: they were created as public institutions. The advantages of being private puts SENAI and the other Brazilian counterparts one-step ahead of the others. There is less waste, less corruption and a much better targeting of courses for existing jobs. This latter argument is quite potent. Employers' associations have strong incentives to ensure that the training offered by the schools they control is targeted to real jobs.

These countries created public instead of private institutions. This was the wrong learning for Latin America. Or better said, incomplete learning, since the other aspects that were copied worked adequately.

Some of the Latin American counterparts were quite creative. For a while, SENA from Colombia was the leading star. In some ways, it was more creative than SENAI. However, the internal difficulties of Colombia had deleterious effects also on training. INA of Costa Rica was also quite innovative.

Chile is a fascinating case. During the Pinochet tenure, neo-classical economists had ample political power to experiment with privatization schemes, in all sectors of the economy. This group displayed a mixture of pragmatism and laissez-faire ideology. There was a decision to privatize INACAP, the Chilean public training institution – very similar to the other Latin American counterparts. However, compared to SENAI, it was a different model of privatization. The INACAP funds were transferred to firms, so that they could use them to go to the market to buy training. Firms were free to decide how to use the funds and where to purchase courses.

INACAP had to fight for contracts and had to become “lean and mean”, in order to survive. The model did not provide it with stable public funding. Instead, it had to compete for funds with other institutions.

The results are quite instructive. INACAP was a sound institution and was able face the market turbulence. It survived and prospered. However, initial training suffered. As in all industrial countries, firms are reluctant to invest in initial training. The reasons are simple. They can hire already trained workers and if they train them, they risk paying the price and having them poached by competitors. Some observers consider that Chile still pays the price of too little initial training for those who cannot afford the costs, i.e. the poor.

In other words, the development of mechanisms to outsource training was an important social learning in Chile. Low and behold, the solutions did have some unwelcome consequences, particularly in the case of skilled manual occupations.

In recent years, most institutions have become closer to the market, creating stronger links with firms. In addition, entrepreneurs became more powerful actors inside these institutions. All in all, there is learning taking place in several institutions. They are creating fresh solutions and fixing old ailments.

Surely, some have undergone serious or almost fatal crises. A few are in a sore state, crippled by inertia and politics. To a certain extent, their ability to overcome old problems and create new solutions is correlated to the country’s level of economic development. That is to be expected.

To sum up, training in Latin America has over half a century of innovation, learning and learning feedbacks. Compared to other parts of the developing world, this is where most innovations have taken place. Nevertheless, the process is neither linear nor are the fixes always forthcoming . Many errors were committed and some of them were not repaired.

1.7. Demand-driven training: In theory or in practice?

From the late 1980s, it was becoming obvious that many graduates from public training institutions failed to find a job sufficiently close to match the skills they had learned. Or, they were unable to find a job in the formal sector. Worse, they did not find any jobs.

The World Bank took the lead in pointing out the absurdity of offering expensive training that leads nowhere. I was at the ILO headquarters in Geneva and reverberated the idea, promoting it as one of the leading issues in training policies.

The issue was quite obvious to us. The number one problem in training was lack of targeting. Too much money was being wasted due to the fact that the training offered around the world did not lead to jobs where the training costs are even minimally justified.

The WB and the ILO widely preached these ideas. Interestingly, we found little opposition from the national training institutions, no matter in what continent they were located. They were always received as a sound policy principle. After all, why train people who are not going to deploy the acquired skills?

Nevertheless, the reality was something else. We hardly saw any attempts to better target training. It continued to be “business as usual”, with the same huge gaps between training and jobs. Not that training authorities had any obligation to please the ILO or the WB. But they owed it to themselves and to the taxpayers who funded training the obligation to offer meaningful programs. Obviously, no learning was taking place. Or, if they learned, it did not lead to action. This was a flagrant collision between perception, policy and action.

The reasons are not hard to understand. The logic of efficiency tells clearly that it makes no sense to waste money on training that will not be useful. However, institutions have their own logic that often overpowers the good use of resources. There are workshops, curricula, training materials and instructors already deployed to offer courses. If the graduates fail to find jobs or are unhappy for any reason, their means to effectively complain are minimal. They disperse after graduation and, for all practical purposes, are unable to complain in a forceful way. Their clout to change anything in the training center is close to zero.

Potential employers may be disgruntled because they cannot find the skills they need. But they are also far away from the training center and are not adept at complaining about such issues. The fact of the matter is that very few are interested in what goes on in vocational training.

Therefore, unhappy customers have few means to make their displeasure known and even less power to put effective pressure on training centers. In other words, the political cost of missing the target is close to zero.

In contrast, closing a course that has no market, for whatever reason, can bring deep political turmoil inside the institution. What do you do with the surplus instructors? How to resist the political pressure from unions or other such political bodies that rally in favor of those instructors being displaced? New courses will have to be planned, developed and staffed, but with what resources? Inertia is the most pervasive bureaucratic trait. Change is painful and fiercely resisted.

In so many words, the political costs of redirecting public institutions away from waste and dysfunctions can be huge. They tend to largely overpower the political advantages of changing course offerings. Therefore, repeating what was said before, under such conditions, either the institutions do not learn (mostly because they do not want to learn) or they learn and do nothing about it⁶.

6 C. M Castro and A. Cabral de Andrade, "Supply and Demand Mismatches in Training: Can Anything be Done?" *International Labour Review*. Vol. 129, No. 3. 1990.

2. LESSONS: TRAINING INSTITUTIONS LEARN, BUT NOT ALWAYS

Now comes the difficult part of this paper. I have told many stories – in fact, I could tell many more. Each yields a tidbit about policy learning or non-learning. The challenge at hand is to extract some kind of pattern out of that motley collection.

2.1. Hidden agendas

People and institutions have hidden agendas. What they say and, above all, what they do reflect these agendas, rather than formal rules or official rhetoric. These hidden agendas are driven by self-interest and organizational culture.

Innovating, showing that one can do better, fixing errors are open and proud agendas. But these are neither the only agendas nor the most powerful ones. There are negative agendas, having to do with avoiding conflict. In many of the cases examined, failure to learn was a means of avoiding painful or dangerous clashes with the bureaucracy. The hidden agenda can be more powerful than the official statements of institutions.

2.2. Organizational culture

Individuals inside organizations act in ways that are in accordance with accepted norms. Organizations develop their mores and patterns of approved behavior. And they frown upon those who challenge them.

In some rare organizations, criticizing colleagues and denouncing inefficiencies may be acceptable. But in most, it goes against the grain of organizational culture. It is considered a lack of loyalty to fellow workers. At worst, it is viewed as treason. Prudent officers know that a disgruntled colleague can trip their careers.

As an example, in the multilateral banks, we observed that while the most serious failures are in the bureaucratic machinery, this is off-limits to the corrections of course that are quite obvious to any perceptive observer. Hence, policy learning is seriously curtailed by the unspoken rules, such as the hesitation to embarrass colleagues, or the avoidance of decisions that would require a major upheaval for implementation.

The French AFPA is not bound by the strong culture of the German Dual system. In fact, apprenticeships in France are a minor part of the training machinery. Therefore, one could speculate that designing a trimmed down system for export purposes would not be a “crime lèse magesté”, as it would be considered inside German training bureaucracies.

SENA of Colombia had a long stalemate, resulting from the powerful presence of the labor union of its employees. It could not get away from a very dysfunctional situation because it would have meant total war. No executive wanted to do that, no matter how well it had learned about the solutions. Decades elapsed before some of the most serious stalemates could be sorted out.

2.3. The critical issue is not learning but using what was learned

As we examined a fair number of cases, we came across many situations in which mistakes persisted and were not corrected. Some of them persisted for a long time.

Perhaps the institutions failed to learn from experience. They did not realize that there could be other ways of doing things that were better. But perhaps this is the wrong way of looking at it. Maybe many knew what was wrong and also knew the right solution. But in the equation of costs and benefits, denouncing the error would be perilous or foolhardy.

Heads of training institutions pay lip service to tracer studies of graduates. But in practice, they are rarely if ever performed. The few existing studies were imposed by the WB or the IDB. The reason is clear. They do not want concrete evidence that training does not help graduates to get jobs. With or without the quantitative evidence, the incentives to do nothing are paramount.

Hence, we never know for sure whether individuals or institutions learn and do not use what they learned, or if they never had the incentive to learn. Perhaps this is a moot point. The end result is the same

2.4. The chances of learning are greater if the payoffs are positive

In situations where professionals “get medals” for learning and proposing new solutions, there are good chances that this will happen. Of course, alert and creative collaborators are required to come up with good ideas. But chances are that if there are personal gains from learning, this will prompt people to invent solutions or identify problems.

Typically, design and engineering departments of firms are rewarded when they have good ideas. And the greater the rewards, the more ideas they have. Bank officers who develop training projects are, in effect, R&D workers, in charge of creation. Some are not able to innovate and end up producing what bank jargon calls “cookie cutter” projects. But those who come up with better ideas get points for that. In fact, they may even get real money prizes. In so many words, there are incentives for being innovative in project design. Surely there are some limitations, in particular, from the host countries. It is easy to be creative but it is not so easy to be a Minister trying to implement a complex project, full of never-tried solutions.

This paper reviewed a set of innovations inside training institutions. It also examined institutions that expand or are replicated into different versions or places. People who design new projects are rewarded for being creative and for finding solutions to problems.

Contrariwise, learning can reveal errors and create tensions and conflicts inside institutions. Therefore, those denouncing errors will face opposition and, eventually, reprisals. In the usual situation and for most people, the best course of action is not to

rock the boat. If that is the case, either no learning takes place or the solutions are not seriously considered.

Let me illustrate the point with the example of a loan to a poor South American country. It consisted in two parts. The first element was to fix the official training institution that was in deep trouble. Due to mismanagement, there were no funds to pay teachers or instructors, only the managerial and service staff. Therefore, it did not have one single student. The public policy reasons to fix it stands to reason. Yet, several years after the loan was signed, nothing had happened, even though the repairs were crystal clear and simple. But politically, the costs of fixing the problem were astronomical.

The second part was an elaborate system of vouchers distributed to small firms. With them, their owners could buy training for their employees in any of the accredited private vocational centers. Against all odds, this complicated segment of the project worked quite well.

The contrast is stark. In the first part of the loan, the least important repair would unleash an avalanche of powerful complaints. In the second, everybody stood to gain from the new scheme. Even the bureaucrats were complimented for doing the right thing.

2.5. Power inside institutions matters

The two Maghreb countries should have learned that the AFPA programs were far more successful and less expensive. However, people sold on the classroom-based formula monopolized decision-making.

By the same token, the Dual System defenders must have had enduring power inside German bureaucracies. The mediocre results that accumulated all along the years took a long time to yield policy changes.

IDB project developers corrected errors in new projects, because they knew them from previous versions. But they never touched the serious shortcomings in the execution of the project, because the powers to be were too threatening if they did.

The Olympic attitude of most training institutions on the mismatch between training and demand can be observed everywhere. What counts, in practice, are the political costs of stepping on the toes of colleagues. In contrast, former students and employers are far away and have few means to voice their complaints in an effective way.

In other words, power matters. Those who yield power inside institutions, to a very large degree, control the decision-making process. Reason, logic and efficiency remain on the back burner if the learning challenges the comfort or peace of people with some power inside the institution.