

World Bank (WB) Long Life Learning (LLL) Project

The Brazilian case study: Mapping the “invisible lifelong learning (LLL) non-system”

Final synthesis

This papers presents a synthesis of LLL case study in Brazil, summing up the main results detailed in the project’s final report. This synthesis aims to answer or discuss the main questions presented in project’s Terms of Reference (TOR), taking into consideration comments received from William Experton, Joshua Gallu, Cláudio de Moura Castro, Martin Carnoy, Jean Louis Reiffers and Roger Diaz de Castro on our former draft reports. While thanking them all for their contribution, we keep full responsibility for this paper.

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1. How have we defined LLL in Brazil?

LLL – Long Life Learning in Brazil should be seen not only as VET delivered by specialized institutions, but also as all types of events (courses, seminars, meetings, publications) likely to contribute to the development or improvement of skills, attitudes, information and other requirements that are indispensable or valuable for working and living in our society. Indeed, except for basic education of children and teenagers (crèche, kindergarten, primary and secondary school), all kinds of educational and training events may be seen as LLL in Brazil.

In fact, we have assumed that Brazil has a vast array of training and education activities that neither result from public policies nor are acknowledged by those dealing with education administration and policies. This is the “invisible” world of VET. It is private, often informal, often done inside firms. It frequently uses TVs and videos. Increasingly, e-learning is becoming a fashionable and popular solution, either as a stand-alone resource or in combination with other media. In many cases, it exists as a non-educational branch of federal, state and municipal governments’ commission training programs. All these activities can be viewed as LLL, in our context.

This would include the broad availability of courses and training programs of all possible varieties, from the VTIs - Vocational Training Institutions and technical school programs to Telecurso open viewing, languages, computers, extension, specialization, hobbies and arts and crafts courses. Both formal and non formal organizations – VTIs, technical schools, universities, non-degree proprietary schools, magazines, newspapers, TV and radio programs, consulting firms, vendors of equipment, magazines and supermarkets, churches, clubs and unions - all of them are delivering/selling LLL in Brazil. All these channels are part of the vast and unmapped “non-system” that has been operating for almost a century all over the country

The expression “invisible non-system” has been adopted for the following reasons: a) due to extent, diversity and “modus operandi”, it would hardly be systematically computed in global statistics or survey; b) although part of them is included in educational statistics, it is not considered LLL, but is viewed as regular education (e.g. “supletivos”¹) instead; c) computed or not, this “non-system” is hardly taken into account for public policy purposes, in labor, education or social fields; d) it is not subject to any central coordination, despite including “systems” regulated by the Education Law, the Labor Law or other legal instruments.

In other words: it exists, works on, and its potential clients – employers, entrepreneurs, the unemployed - know where and how look for it, but it can hardly be assessed in global terms for research, planning, evaluation or other public policy purpose.

¹ “**Supletivos**” are shortened courses for adult education at Primary (for people over 15 years old) or Secondary (for people over 18 years old) levels. To get a certificate in either level, applicants must pass an official examination periodically offered by the Secretaries of Education in each State or by authorized institutions, either public or private. For the Primary level, the official examination includes 6 disciplines (Sciences, Geography, History, English, Portuguese and Math), corresponding to 8 grades. For the Secondary level, there are 8 disciplines (Biology, Physics, Chemical, Geography, History, English, Portuguese and Math), corresponding to 3 grades. Applicants may take the examination in one or more disciplines at a time, and receive a certificate for each discipline. The final certificate is given when approval is obtained in all of them.

2. How was the case study designed?

This project has a triple objective, according to its TOR - Terms of Reference (cf. Cláudio de Moura Castro):

- a) “to map the array of VET/LLL in Brazil, including formal and non formal activities, mainly the ones that do *not* result from public policies nor are acknowledged by those dealing with educational administration and policies;
- b) to understand the logic of its development; and
- c) to analyze the ways in which this “non-system” could contribute to an LLL policy.”

As mentioned before, here, as elsewhere, most of activities defined as LLL are not covered by official statistics. Educational and labor statistics in Brazil provide information about part of it, but do not focus on the LLL supply. A national survey or a kind of census to map LLL in the country would thus be desirable, but given the timetable, budget and uncountable difficulties that even the National Census has to cope with in our country (distances, transportation, communication, mistrust) its application is out of question. A VET census in Brazil would actually have to include many censuses, given the wide variety of modes of delivery, levels and target groups - not to mention our social and economic diversity.

Anyway, in order to discuss the questions set out, we need more than global figures. Thus, we have proposed a case study in Minas Gerais (MG), that happens to be one of the biggest, most developed, socially and economically diversified Brazilian States².

The case study was designed with two main components: a) an exploratory research in private firms active in different economic sectors and cities of MG State, including interviews with their executives and employees, and also with informal workers in MG, designed to provide a demand-side view on the LLL market; b) a compilation of secondary sources – statistics, surveys, studies – that could give us an idea of size and profile of LLL market in Brazil, from the suppliers’ point of view.

The exploratory research was conducted from April 21 to May 3, in five cities of MG State – Belo Horizonte (the State Capital, the largest city in the State), four large, medium and small cities in the Metropolitan Area (Contagem, Nova Lima and Caetés), a small industrial town in the state’s hinterlands, that happens to be an electronic pole in the State (Santa Rita do Sapucaí).

In these five cities, we have visited 14 enterprises - small, medium and large-sized - operating in important sectors of MG’s economy, either modern or traditional. The firms were intentionally selected based on their innovation potential and competitiveness profile, but so

² According to the last Census (2000) MG is the second largest State in Brazil with 17.9 million inhabitants representing 11% of Brazilian population (170 million people). It is the first State in number of cities (853, representing 15% of the total Brazilian municipalities - 5.5 thousand). MG is the third economy in Brazil (following São Paulo and Rio de Janeiro States), with an EAP of 8.4 million people (11% of Brazilian EAP over 16 years old – 75 million people) and a GNP of US\$52.7 billion, 9% of Brazilian GNP (US\$594 billion in 2000). Given the size of its population, GNP per capita in MG (US\$3.2 millions) is under national average (US\$3.5 millions), but the state remains among the 5 richest in the country.

as to include specifically national enterprises or groups, operating mainly in domestic market. In other words, we have looked for common firms that are doing well in present economic context of innovation and competitiveness.

In each firm, we interviewed people working in different positions and jobs, trying to keep a balance in terms of gender and age (people under and over 30 years of age). We have classified this sample into two groups for analytical purposes: Executives (14 people) - including owners, presidents, managers and directors) and Employees (37) – supervisors, technicians and skilled workers. We assumed that these categories would demand or need LLL more intensively. This group of firms (14) and people (51) was supposed to provide us with a view of the formal side of the labor market concerning LLL needs, desires, practices and policies.

As a complement, we interviewed a small group of unemployed people (12) at the Public Service of Employment (Sine) downtown in Belo Horizonte, in an agency named “Psiu”, on April 22, 2003. Sine is a public agency operating all over the country to assist the lower classes of unemployed and underemployed people, most of whom engage in odd jobs (“bicos”) to survive. It sounded sensible to approach what happens in the informal labor market, which represents 53% of Brazilian EAP.

As in many other countries, the informal side of Brazilian economy is barely known or studied. It would be impracticable to try to catch it within the limits of this case study. From Sine statistical data, we know that most of its candidates keep working on odd jobs, moonlighting and other informal activities while looking for a better job. They have also been priority target group of training public programs since 1995. As such, they could illustrate histories and strategies of informal workers concerning labor and training.

Based on the main findings of this research, we have tried to map and estimate the size of VET market in Brazil. For these estimates, we used both official and non official statistics, including recent surveys that have partially mapped the VET in Brazil: the VET Census, from Ministry of Education (MEC) and the VTIs Catalogue, from Ministry of Labor (MTE). Both surveys were conducted in the later 90s and may be considered somewhat updated in gross figures.

In furtherance of this task, we tried to design the profile and extent of distance education in Brazil, a segment that seems to have great potential for LLL. A specific research was conducted, mainly in secondary sources (Internet and literature), in parallel to the exploratory research in MG.

3. How much valid or biased is our sample?

Although we did not have a statistically representative sample, we assumed that MG case study is valid to illustrate individual and institutional strategies concerning LLL in Brazilian urban economy, in addition to providing insights on the profile and “modus operandi” of our “invisible LLL non-system”. We do not consider that our results could be severely biased by the small size and profile of our sample, for the following reasons:

- a) Despite being intentionally selected, the firms have training policies and practices consistent with the trends that have been stressed by other surveys and studies since the late 80s in Brazil: to be innovative, competitive or at least to survive, firms need more

educated and trained people. They always try to hire the best and more trainable people, but this does not eliminate their responsibility for providing continuous updating and recycling inside the firm.

- b) The firms were selected for being innovative and competitive. Their profile has confirmed this assumption for almost all of them. They are not much different from other survivors in our economic conditions, though. In fact, most of them – with a few exceptions – may be seen as “common” firms, unnoticed by the media or specialists as cases of innovation and leadership in their markets. Besides, they are mostly family businesses, operating in internal market, selling for local consumers (individuals and/or firms). They are concerned about quality, innovation and productivity because this is the way to survive and succeed in a market that is increasingly deregulated and offers many alternatives for consumers.
- c) The sample of firms is small, but it is illustrative of practices and policies in important and still labor-intensive sectors of Brazilian economy: mining, building industry, retail commerce, tourism, urban transportation, and electronic and metallurgical industries.
- d) The sample of employees in these firms illustrates a vast array of office and shop floor jobs that are more typical or more frequent in these sectors. They are indeed more educated and trained than the average EAP, but this is the dominant profile in formal labor market that is becoming more and more selective.
- e) Concerning the informal labor market, we have also a small sample, selected from the Employment Public Service (Sine) in Belo Horizonte. This could pose a bias, because these Services receive a more organized and better-informed share of unemployed people. More vulnerable groups (the disabled, homeless, hungry and illiterate people, as well as street workers) do not reach Sine, but these groups should be seen as candidates for social assistance, rather than for labor and training services. Besides, our small group of unemployed people is not much different from the universe of Sine’s candidates all over the country (almost 5 million people), in terms of social and economic profile, labor situation, training and difficulties to get a formal job. Actually, they are also similar to a great extent of unemployed people in Brazil that keep working in odd jobs while looking for a better job.

Although we may assume that our samples are valid for our case study purposes, it is worth stressing that there is much more to be studied in terms of LLL practices and policies in Brazil. Important groups/sectors could not be included in our study, despite being under increasing pressure for modernization and competitiveness: rural workers and technicians in the primary sector, mainly in agribusiness, which is generating positive results for the Brazilian trade balance; handicrafts and extractive activities, which are emerging as a potential solution in terms of sustainable development; the public sector, including military and civil clerks; the formerly public utility services of electricity, water supply, telephone, banking, steel, railroad and others that have been privatized since the 90s. A public LLL policy should consider all of them.

4. What are the main findings about the firms’ profile?

Although their operations are mostly restricted to the domestic market – i.e., without any strong appeal to compete in the external front - the firms are extremely concerned about two issues: innovation and quality, considered as essential components of modernity and competitiveness. These characteristics are highly determinative of their employees’ profile, policies, practices and demand for education and training.

“Quality philosophy” seems to be widespread among their executives, supervisors and technicians: “charming the client”, “minimizing risks and losses”, “rationalizing operations”, and “involving people” are expressions commonly heard among them.

Technological innovation is frequent in most firms: the use of computers and automated systems for offices, stores and stocks management, new materials and equipment are widespread, modern ideas and techniques are supported, i.e.: TCQ (total quality control), SPC (statistical process control), ISO certification (the larger ones). They are mostly concerned with the environment (preservation of natural resources), human development, clients’ satisfaction, affirmative actions (gender, race, and disabled people).

Larger firms – Construction, Supermarket, Metallurgy and Mining - have ISO (9000, 14000, 14001) certificates. The small and medium ones cannot afford the costs of the ISO certification process, but they try to operate according to the “quality philosophy” principles mentioned above. Transport is a firm that seems to have implemented all the conditions to obtain an ISO certificate – but its manager explained that the costs of the certification process are too high for the firm’s budget (not to mention the conservative view of its owner).

Concerning technology – i.e., R&D applied to the production of goods and trades in each sector – two main trends should be mentioned:

- a) firms that have developed their own solutions, strategies, systems and equipment, like Metallurgy (refractory lab), Mining (deep drilling), Construction (infrastructure construction), Solar (solar energy), Transport (urban transportation automation), Groceries (automation for small/medium stores);
- b) firms that are adopting, buying, using the most recent innovations in their sectors, like Car Sale (on-line car sales with the industry and mechanic diagnosis by computers), Adventure (equipment for extreme sports), Supermarket and Hotel (hypermarket and hotel operations); Cellular and Computer (electronic assembly).

Specifically in terms of automation – use of computers and systems – two trends are also to be distinguished:

- a) basic management/administrative operations (sales, accountancy, stocks, payroll, etc.) are automated in all the firms, even the smaller or less innovative ones, like Inn, Gas Station, Cellular, Adventure, Solar;
- b) larger and more innovative firms are highly automated, and are developing and/or applying specific systems for production and/or management control, as above-mentioned.

Case study in MG, Brazil: firms' profile

Firms*/size	Profile
INDUSTRIES	
Mining (large)	Traditional branch, innovative gold mining, owned by a South African group, operating only in the export market (foreign banks), 168 years in MG, 2,564 employees (74% permanent, 5% female), 600 computers
Metallurgy (large)	Traditional branch, innovative plant of refractory materials, Brazilian capital, sales mainly in the domestic market and occasionally in Mercosul, 63 years in MG, 2,045 employees (100% permanent, 4% female), 1,200 computers (600 in the shop floor)
Construction (large group in Brazil, medium plant in MG)	Traditional branch, innovative firm of infrastructure building; domestic and worldwide operations; Brazilian capital – family group from MG, 55 years in MG, headquarters in SP since 2002, 350 employees in BH plant (100% permanent, 2% female), 40 computers
Computer (medium)	Modern branch, modern producer of computers and electronic parts, controlled by Taiwan group (60%) – that controls other small and medium firms in electronic sector in MG, sales mainly in the domestic market, occasionally in Mercosul, 9 years in MG, 128 employees (100% permanent, 60% female), 40 computers
Cellular (medium)	Modern branch, traditional assembling of cellular phones and electronic parts, controlled by Taiwan group (60%) – the same that controls Computer, sales mainly in internal market, occasionally in Mercosul, 3 years in MG, 235 employees (99% permanent, 70% female), 30 computers
Solar (small)	Modern branch (biotechnology), innovative solar heating firm, family business, created and managed by a foreign woman, Brazilian capital, 6 years in MG, 34 employees (58% permanent, 20% female), 15 computers
COMMERCE	
Supermarket (large)	Modern branch, innovative supermarket for mass consumers, 100% French capital, national operation, 27 years in Brazil, 7,000 employees in Brazil (71% permanent, 40% female); MG represents 7% of group operations in Brazil, 1,980 computers (80 in BH store)
Groceries (medium)	Traditional branch, innovative grocery store for sophisticated consumers; family business, national capital, 2 stores in BH, 20 years in MG, 400 employees (100% permanent, 50% female), 70 computers
Car Sale (medium)	Traditional sector, innovative car sale and automotive services; family business, national capital/market, 23 years in MG, 237 employees (100% permanent, 25% female), 17 computers
Gas Station (small)	Traditional but competitive branch, traditional gas station, mechanic maintenance and convenience store; small family business, managed by the former owner's widow, 26 years in MG, 57 employees (100% permanent, 2% female), 46 computers
SERVICES	
Transport (large)	Traditional but competitive branch, innovative firm of urban transportation; family business, Brazilian capital, local market, 23 years in MG, 860 employees (100% permanent, 30% female), 21 computers
Hotel (medium)	Traditional sector, innovative business hotel, 100% French capital, worldwide and national operation, 27 years in Brazil, just opened in BH, with 154 employees (82% permanent, 57% female), 32 computers
Inn (small)	Traditional sector, traditional country inn exploring new ecological-mystic appeal, small family business, owned and managed by a woman, 10 years in MG, 28 employees (78% permanent, 60% female), 8 computers
Adventure (small)	Modern branch, innovative firm of trekking and extreme sports; family business, Brazilian capital, local and foreign clients, 6 years in MG, 12 employees (50% permanent, 15% female), 12 computers

Source: interview with Executives and observation in each firm

* Fiction names

5. What are the main findings about personnel's profile in these firms?

Owing to the innovative and competitive profile of most firms, their personnel are more educated than the average EAP. Illiteracy rate is negligible and almost 80% have at least completed primary level (8 years of education). In Brazilian or MG's EAP, only 40% have at least primary education. Employees at secondary/higher level reach 40% in these firms, almost twice the proportion found in the EAP. The rate of personnel with technical education at secondary or higher level is also high (40%).

This general picture reflects not only selective hiring processes, but also firms' policies of providing "supletivos" for their Employees (like Telecurso 2000), for the purpose of improving their performance and also to comply with the requirements to get quality certificates (ISO).

There are, as expected, noticeable differences among the firms, which can be divided into the following categories:

- a) firms that operate only or mainly with educated/skilled people (at least secondary level): Adventure, Solar, Metallurgy – all of them innovative;
- b) firms that operate mainly with uneducated people (less than primary level): Gas Station (whose owner declared she does not want more educated people because they would demand higher salaries) and Transport (whose main owner seems to be conservative and not very supportive of education, training and other benefits to the employees);
- c) the others try to keep a balance between higher and lower educated people, all them have, however, with a workforce that is at least primary-educated, a privilege in our context.

Education level of permanent employees in the firms

Level/grade	Average %	Firms over the average
none, illiterate people	2	Gas Station, Inn, Construction (5-10%)
under primary (1st to 7th grade)	20	Gas Station, Cellular, Transport, Construction, Supermarket (25-50%)
primary (8th grade)	38	Inn, Hotel, Groceries, Computer, Construction, Mining (45-70%)
secondary	20	Adventure, Computer, Metallurgy, Mining (25-70%)
higher	20	Adventure, Solar, Hotel, Construction (25-80%)
low educated and low skilled people = no secondary nor technical education	60	Gas Station, Inn, Hotel, Cellular, Groceries, Transport, Construction, Mining (70-93%)
people with technical education at secondary or higher level	40	Adventure, Solar, Computer (45-100%)

Source: interview with Executives in each firm

6. What are the main characteristics of the Executives in these firms?

As proposed, the sample included Executives (14 people) in high positions, as such prepared to inform about firms' policies and practices. Despite the differences in positions and functions, they may be considered equally leveled. An owner of a small business who usually performs different roles - president, director and human resources manager – can be compared to a high manager in a large enterprise in terms of job profile.

Their social and economic profile is consistent with the big picture of Brazilian society and the labor market. Executives come from middle-high/high social classes: mostly white men (only four women, three of them owners of small firms), over 40 years old, married heads of their families, graduates from higher education, high-income earners by Brazilian standards: their average monthly income amounts to 37 minimum wages (around US\$3,000)³ and most of them earn more than 20 minimum wages monthly (around US\$1,600) – a level reached by less than 10% of Brazilian EAP. According to the usual classification, Executives would be next to the top of our social pyramid.

Executives have been in the labor market for over 20 years, more than half of them (11 years) spent in the present firm and most of that time (9 years) in their current occupation. Present job usually is a high administrative position, such as president/director (including small entrepreneurs) and human resources manager. Only five Executives had held other positions in the same firm, but all of them had held at least one former job and position for around 8 years. They seem to be a very stable group in the Brazilian context, since the average job permanence for this category is around 3 years in each firm (cf. EXAME, 2001). Anyway, all of them had rising careers, inside these firms and/or in relation to former jobs .

Executives have in average 15 years of education, which means a higher degree. Psychology, Economics and Business Administration are the more frequent diplomas, and are consistent with their present functions in the firms. Two Executives are taking post graduation courses in business (Hotel) and marketing (Construction), both partially financed by their present firms. Five Executives have also technical education that used to be considered secondary level (before the new Education Law, 1996), almost all related to present jobs: electronic (Cellular and Computer), hostelry and tourism (Inn and Hotel), pathology (Transport, the only exception).

Almost all them (except Gas Station' owner) declared proficiency in another language, mostly English. They have learned it either through courses in non-degree proprietary schools (like Yazigi, Number One, Cultura Inglesa and Aliança Francesa) or by practice (reading, listening, and traveling). Solar's owner is a polyglot who learned languages only in practice, given her origin (Austrian-German) and former career (as a diplomat).

7. What are the main characteristics of the Employees in these firms?

The sample of Employees (37) shows the expected diversity of jobs and functions, consistent with the diversity of enterprises activities. There are also strong differences of education and skills among them. In a general view, they perform the more typical and frequent technical and skilled jobs in the sectors targeted. This means that they may represent, from a qualitative point of view, the human resources basis of these sectors, the workforce that can make difference for competitiveness, one of the main sources of the demand for education and training.

In social and economic terms, they also follow the expected picture of our formal labor market: white/brown, younger than the Executives, secondary education and medium income-earners, around 6 minimum wages monthly (US\$480), which is considered “middle class” in our income and social scale.

³ Monthly minimum wage in Brazil is around US\$80 (R\$240) since April 2003.

The Employees have been working for about 14 years, which means that they started working at the age of 15-16 years, as is the rule in Brazil. They are also professionally stable, having reached 6 years in the present firm, most of them (5 years) in the position currently held. For a third of them (12 people), this firm is their first employer (including 3 that had come from informal market). Average time in former job/position is around 6 years, another indicator of their stability.

Those who have held a former position in the firm in question had climbing careers. Employees coming from another firm/position were equally divided into two groups, according to their rising or horizontal trajectories (equivalent former occupation and/or level). Descending trends were exceptions (2 men over 35 years old, in larger firms).

Employees have 11 years of education, which is equivalent to secondary education, the level most frequently found. Almost all of them have completed at least the primary level (8 years of education), a selected group that represents around one third of Brazilian EAP and is consistent with the recruitment practices in the formal market. Only one worker is under this level, but he is taking a “supletivo” course (see foot-note 1), financed by the firm (Mining).

Seven Employees are also studying, four at secondary level and three at higher levels, and most of them financed by themselves and/or families. Students are younger, less than 30 years old, working in larger firms, which pay more and/or offer career perspectives.

Half of the Employees are graduates from technical courses that were formerly equivalent to the secondary level, but now are equivalent to college, for instance: Hostelry (Inn), Mechanics (Transport and Metallurgy), Electronics (Computer), Job Safety (Construction), Accountancy (Groceries), Mining (Metallurgy). Most of the Employees that work in industrial firms have completed vocational training, which among them is referred to as “technical courses” (electricity, mechanics, welding), mainly because they are offered by Senai and/or technical schools.

Similarly to the Executives, most Employees have claimed proficiency in a second language, almost invariably in English. They have learned it in courses and in practice. Foreign language courses have been taken especially in non-degree proprietary schools: Yazigi, Wizard, Number One, Fisk, CCAA, CEL LEP – which have been spreading all over the country, often through the franchising system. Four Employees mentioned self-learning courses available at newsstands (English and Spanish, Globo Editions).

8. What are the main characteristics of The Unemployed?

The Unemployed are young or adult black, poor, low educated people, with a male prevalence, usually coming from big families – a fair picture of the majority of the informal labor market in Brazilian metropolises. All them earn a small income (around US\$50 monthly) from odd/temporary jobs, pensions, rents and other sources that make up survival strategies among the poor population. Most of them, however, are barely above the “poverty line” (people surviving with less than US\$1/day). Despite having a similar age profile if compared to the Employees, they generally live with parents or other relatives.

The Unemployed are similar to the Employees in terms of average time in the labor market (14 years) and age at which they began to work, but among them some examples of child labor are to be found, as is the case in the lower classes in Brazil. Despite this time in the

labor market, only three Unemployed (two men and a woman) had experience as formal employees, i.e., employment agreement registered in the labor booklet issued by the Ministry of Labor.

Most of their histories – similar to half of Brazilian EAP - are only in non formal jobs, a tendency that has been growing in the country since the 90s: the “senior” informal workers or people over 30 years of age who have never had a formal job in an established firm. This may be a good alternative for a small part of them - those who can make more money as free lancers and micro entrepreneurs. Most informal workers, however, keep dreaming of “formal jobs”, because of the employee benefits ensured by the Brazilian Labor Law - like vacation, health insurance, transportation and meal vouchers, a 13th salary pay (Christmas bonus), unemployment insurance. These benefits, however, have been criticized for causing more informality and high turnover⁴.

Most of the Unemployed are engaged in odd jobs or moonlighting that may be seen as a kind of “unemployment assurance” for informal workers. They work from 8 to 24 hours a week, mainly performing tasks related to their past experience or accepting whatever they can get.

Their main difficulty to get a job is that they do not have any means to prove their past experience (most firms require the above-mentioned labor booklet), or actually there is no such experience to be proved. Other frequent difficulties are: lack of personal or professional references, low education (less than secondary level), lack of skills (mainly computers and English), distance (they live in poor peripheral districts of Metropolitan Area, which means time and transportation costs⁵) and age (formal market hardly hires people over 40).

Those who had former opportunities of formal employment usually had skilled jobs: maintenance mechanics (male), high-tension electrician (male) and English-speaking specialized cook (female). A great diversity is to be noticed among those who have always been informal workers, from low skilled tasks (servants, cleaners) to jobs that would demand specific training or at least secondary education: automotive mechanics (male), crane operator (male), dentist assistant (female) and office clerks (two females).

Mobility among the Unemployed cannot be classified either as vertical or horizontal, but mainly as “eclectic” or “crossed”: a man had most of his job experience as a night watcher, but he currently works as a bricklayer; another used to be automotive mechanic, but is taking any type of job he can get (cleaning, watching, loading, carrying, cooking); a woman used to be a dentist assistant, but now works as a salesclerk on weekends; another one, formerly a cook, makes her living as a daily cleaner and a salesclerk on weekends. “Jacks-of-all-trades” are not unusual characters in the informal labor market.

⁴ According to specialists (PASTORE, 1994; IPEA, 2000) these benefits contribute to raise labor costs and do not stimulate formal hiring in labor market. Besides, Labor Law has a built-in bias towards higher turnover, as any worker who is dismissed without cause (bad behavior, delays, absenteeism) gets a lump sum amount of money from his accumulated savings in FTGS – Secure Fund for Time of Working (8% of monthly wage, paid by the firm - not by the employee). Employment Insurance is also seen as cause of informality and turnover, since not a few formal employees ask to be dismissed in order to receive it (around 1.5 minimum wage for 5-6 months), and continue to work informally for the same employer.

⁵ Since the Labor Law obliges employers to give a voucher for transportation, firms prefer to hire people who live nearby. Other purposes of this policy are to reduce absenteeism and delays caused by traffic jams, strikes and other transportation difficulties. Besides, owing to increasingly urban violence, firms tend to avoid people living in “risk areas”, i. e., more distant and poorer districts.

The Unemployed have 8 years of education in average that would mean at least primary education for most of them, and seems to be the minimum base to look for a job - yet not enough to get one. Women have nine years of education and men around seven, reflecting the EAP profile in Brazil, where the female EAP is in general more educated.

Only four Unemployed are below the minimum education level – among them a woman, 33 years old, who is taking a private “supletivo” to get her certificate this year (she is the cook who speaks English). Two other students are a 22-year old man trying to finish secondary education in a public school and an 18-year old woman taking a technical course (Secretary), financed by her family.

9. What are the main VET policies and practices in the firms?

Only a few firms (Groceries, Metallurgy, Mining and Construction) promote or stimulate formal education for most of their Employees. The courses they are used to offer are mainly “supletivos”, such as Telecurso 2000 – an innovative and widespread technology of adult education and training courses on TV⁶.

Larger groups also promote higher specialization and post graduation courses for its managers and high-level technicians. Metallurgy, Mining and Construction have agreements with São Paulo University (USP) for business and engineering courses. These courses are considered important not only to improve job performance, but also to the extent that they are counted towards ISO certificates. The medium and small firms have not mentioned it, but most of their Employees have or look for certified VET, at least at technical level. Even the Unemployed – mostly low educated – express their desire to get this kind of certificates, as they are expected to open more opportunities in the labor market.

An interesting point is that most Executives stated that their firms are investing in “general education” through training courses in English, Math, Communication, Statistics and Quality Control. They believe that these programs may compensate for the low level or the poor quality of education. For our purposes, this kind of training is considered LLL.

Actually, VET is largely promoted, except in two small firms (Adventure and Inn) whose owners mentioned problems such as high costs, seasonal activities (tourism) and economic recession. They would like to train their employees, but cannot afford VET, even if delivered by S System (Senai, Senac, Senat, and Sebrae)⁷.

According to the Executives, VET is offered to all employee categories in the firms, but specially for two of them: operational workers in the shop floor and their leading managers or

⁶ Telecurso 2000 was developed by FRM - Roberto Marinho Foundation (linked to Roberto Marinho Group, one of the biggest in press and television in Brazil) in partnership with FIESP System, which includes the Industry Federation in São Paulo State and Senai/Sesi. Telecurso was launched in 1995, taking into account the successful experience of TV courses (“telecursos”) in the late 70s, developed by FRM and FIESP System (cf. OLIVEIRA e CASTRO, 2002 and SEADE, 2002).

⁷ Despite being supported by a compulsory payroll levy, S System charges all types of VET demanded by private firms. By law, the System must only offer Apprenticeship (for people of 14-16 years old) free of charge. Other programs – VET, technical assistance – may be charged.

supervisors. Administrative clerks, in general more educated, are less often trained, as they are recruited from secondary and higher education levels, which seem to fit these jobs well.

Promoting VET is not an exception among private firms in Brazil. Since the 80s, a growing number of enterprises – even the small ones - have assumed VET (and sometimes general education) as part of the costs of becoming modern and competitive (cf. CARLEAIL and VALLE, 1993; CAILLODS and LEITE, 1987; GITAHY, org., 1994; LEITE, 1994c, 1996, 2002; NOVICK and GALLART, org., 1997.). In fact, this seems to be a worldwide tendency⁸ for reasons of competitiveness and social responsibility of private firms.

10. How much VET has occurred in the last two years?

Employees' data seem to confirm the firms' practices discussed above. Most of them (86%) have been trained recently, mainly in areas related to their present/former jobs. Trained Employees were found in almost all firms, even in Adventure, whose owner does not promote VET, but has succeeded in hiring people trained by themselves or by former employers. Inn is the only firm which Employees have not been trained recently, mainly for reasons relating to costs, seasonal demand and lack of opportunity in the neighborhood, according to its owner.

Executives, possibly due to their higher education level and weekly journey, account for the lower proportion (50%) of people recently trained in the firms. It is well known that these positions – managers, directors – have been strongly downsized during the 90s and the remaining executives had their tasks and responsibilities doubled or even tripled. As for small entrepreneurs (like the lady in Solar and the young man in Adventure), they take over many tasks in the firm and usually work harder than most Employees do. Besides, we should stress that the research considered VET only training sessions longer than 4 hours. Executives are used to attend conferences and seminars that can be shorter, yet not less important for their functions; for this group, reading specialized magazines and books can be an alternative for updating and recycling.

Even the Unemployed have also been mostly (75%) trained in this period. This is not a surprise, since they were interviewed at Sine, where people are given the opportunity to get information on VET public programs. But this should not be seen as a bias, given the scale of these programs, which would be enough to include a high proportion of the unemployed or underemployed EAP either in MG or in other Brazilian States⁹. This means that a great part of

⁸ A recent survey involving 1,045 firms in 47 countries – 70 firms in Brazil – has drawn similar conclusions, according to Olga Colpos, the consultant who coordinated the research in Brazil. All the firms – even the smaller ones - are investing in education and/or training. (Cf. www.globo.com.br, May 14, 2003 – Bom dia Brasil" on line).

⁹ Planfor – National VET Program, financed by FAT – Workers Support Fund, has trained 15.3 people in the years 1995-2001 (cf. MTE/SPPE, 2002). This scale would be enough to train all the unemployed and underemployed people in Brazil (around 15 million, corresponding to 20% of EAP over 16 years of age – 75 million people). In MG State, Planfor has trained 1.1 million people, which would correspond to 65% of the unemployed and underemployed EAP in the State (1.7 million people). The follow-up studies with Planfor's graduates (1997-2001) indicate benefits such as improvement in job performance, self-esteem, information and social integration. But effects in terms of employment and income were less frequent: only one third of the unemployed people actually got a job and no more than 20% (national average) had income raises. Planfor ceased in December 2002, but is supposed to be replaced by another training program financed by FAT.

unemployed people or informal workers in Brazil are expected to have received some training recently.

11. What is the VET content? What are the skill needs that these training activities are addressing?

Innovation and quality seem to be the major factors leading the firms to promote education and mainly VET largely. Being modern and competitive implies a new labor profile: instead of the “standard worker” – disciplined and obedient -, the firms are looking for “proactive people”, who are capable of “thinking with and for the firm” (LEITE, 1994c, 1996; NOVICK and GALLART, org., 1997.).

The development and update of this new profile is a task that most companies have been undertaking through different strategies and agencies, as shown by case study. New ideas, as well as quality and competitiveness requirements, are leading firms – even the smaller and more traditional ones – to promote or look for education and training.

The case study has shown that the modernization process, which requires familiarity with computers, digital systems, new materials and machines, is the aspect responsible for generating most of the VET demand. The traditional and so called “simple” jobs now require digital literacy: mechanics, chambermaids, waiters, cleaners, collectors, and drivers must fill in orders and other daily information in computers terminals, in order to feed the management systems. As most of them do not have this skill, firms (like Car Sale, Transport, Hotel) have to assign a clerk to help them or to perform this task, at the end of each journey.

Traditional skills – in mechanics, electricity and electronics – appear to be unsurpassable preferences. Even craft skills for repair services seem to be highly needed (as “martelinhos de ouro” mentioned by Car Sale). In fact, modernization is not a vertical scale where the traditional is totally abolished and only high tech dominates. Modernization is a mix of old and new, where tradition is revisited and coexists with the innovation inside the same firm, in the same job (cf. GITAHY, org., 1994; LEITE, 1996).

The Executives have mentioned a diversified list of courses more often promoted in the firms. For analytical classification purposes, they may be classified in five comprehensive areas:

- a) operational skills – use of equipment, tools, devices, computers (mentioned by 8 firms);
- b) attitudes – such as initiative, leadership, management strategies, relationship with clients, “quality philosophy” (in 8 firms);
- c) health and safety – focusing on problems such as drugs, alcohol, AIDS, sexually transmitted diseases, safety practices on the job, driving, first care, etc. Most of this VET is provided by CIPA - Internal Committee for the Prevention of Accidents - and is mandatory under the Brazilian Labor Law (in 8 firms);
- d) technology - new methods, processes, systems, information, total quality control and other technical subjects related to quality programs and ISO certification (7 firms);
- e) basic skills - math, reading, writing and foreign languages, mainly English (4 firms).

The interviews with Executives and Employees have confirmed these trends, although confirming the differences expected between the group profiles. In the last two years, Executives have been mostly trained in matters that could be labeled as “technological” and

“attitudinal” as to their contents, related to quality and ISO programs, human resources management, marketing, personal relationships and communication. For this group, technological contents are less frequent, since they have technical or higher education and deal mainly with planning and administrative matters. Solar’s owner is an exception: she has taken a long course (800 hours) in plastic injection molding in a German industry, which was important for the new technology used by this firm (she declares herself a pioneer in solar heating systems in Brazil).

As far as Employees are concerned, technologies and attitudes are the major target area for training purposes. These themes reflect the diffusion of new electronically based equipment and systems, new production techniques (known as “Japanese” production methods) and a growing concern with quality and clients’ satisfaction. Operational VET is also significant among Employees, in particular to the extent that specific skills are needed for the operation of new equipment, tools, machines, and devices – like computers and digital systems.

The Unemployed have been trained mainly in operational skills required for most frequent job opportunities existing in the Public Services of Employment. Computer training is frequent, since “digital literacy” has become an indispensable requirement in the labor market (even for supposedly simple jobs, like watchers, chambermaids, sales clerk and office assistants).

12. Are there new or unsatisfied demands for VET?

According to the Executives, most firms (except for Groceries, Supermarket and Mining) would like to offer more training to their Employees (including Adventure and Inn, which have not offered any VET recently). Their needs are mainly in operational areas, but all other subjects are also mentioned, especially in computers, English and proactive attitudes.

Costs are their main problem. Other difficulties are the distance from existing schools or the lack of an adequate agency nearby (three firms). Specific problems are mentioned by Car Sale (how to train “martelinhos de ouro”, the craftsmen they need) and Transport (owing to its owner’s conservative view about training).

From the firms’ point of view, there would be three best alternatives to solve these problems:

- a) the establishment of VET schools nearby;
- b) in-house VET;
- c) distance education, mainly using Internet, videos and mail.

As expected, more VET is also demanded from the Employees’ and the Unemployed’ point of view. Executives are different: they are willing to offer more training to the employees, but they declare themselves satisfied with their present profile, a view that is consistent with the fact that they are graduates of higher education and have long experience in the labor market. VET demands are more intense among young people (under 35 years of age) and Employees in small or less innovative firms - like Adventure, Gas Station, Inn, where VET opportunities are seldom offered.

What are they looking for? Mainly for specialization and or upgrading in areas related to their present jobs or that seem to be valuable in the labor market. They look not only for technological/operational courses but also for technical and higher education, which would leverage their present education level. Computers, business, administration, management, accountancy, engineering, hostelry – are the most desired areas. Higher education may

represent more chances in their present jobs and/or in the labor market. The younger Unemployed see college as a “door” to formal jobs, through internships.

Their main difficulty is the lack of money and/or time. These two problems are related to other difficulties such as distance, unavailability of courses in the city, mismatches between work journey and course timetable. In reality, costs are the major obstacle, especially for technical or college degrees. People would expend in average US\$250 monthly to attend a private evening college - including fees, books, transportation and meal – which would represent more than 50% of Employees average income.

Since courses are not available in the city or nearby, they usually consider the possibility of studying somewhere else, provided that they get a kind of financing to do so. Studying at a school in the same city was also an alternative frequently mentioned. A lower number contemplates the alternative of in-house VET – which would be feasible for operational/technological courses, but not for tech or college degrees. Distance learning (including Internet) seems to have some potential adepts, in particular among Employees.

13. Should specific VET be considered as LLL?

The separation of contents in areas - such as technology, operations, and attitudes - fits analytical purposes, since theory and practice are not easy to separate in vocational training. Courses that seem “specific” or mainly “operational” in fact mobilize and/or promote different abilities (thinking, communication, understanding) and technological knowledge (Math, Sciences).

Some contents may be very specific, but they have “side effects” extending far beyond the work place and help to improve labor performance and quality of life in general. There is evidence that even specific training contributes to develop more general abilities, for instance: statistical control teaches how to calculate percentages using a calculator – simple abilities that are highly valued by low educated workers, since it would enable them to control paychecks or bank accounts. Another example: training in welding includes safety, quality and principles of physics; metrology is an efficient way to remember math.

In fact, this kind of dichotomies – like “general X specific”, “theory X practice”, “intellectual X manual” - does not tell much about the effects, impact or relevance of training. On the contrary, they seem to reflect the existence of a certain academic prejudice against “specific, practice, manual” programs, which are seen as less valuable or even as forms of “labor domestication”. Recent studies are discussing these dichotomies that do not work in the real world of VET, where theory is better built if based on good practices (BARATO, 2003). As far as LLL is concerned, theory and practice, thinking and acting, general and specific should be viewed as indispensable ingredients of learning.

14. How long is VET?

In general, except for atypical situations – such as a course taken by Solar’s owner in Germany and one Employee (Construction) who obtained an MBA - VET programs and courses are short (20-80 hours) in these firms.

Nevertheless, people generally take more than one course in different areas. For this, the average figure for the groups – even the Unemployed – exceeds 100 hours of VET in the last two years. The proportion of Executives recently trained is lower than in other groups, but their courses are longer – around 300 hours/person – ranging from 8 to 800 hours in the same period. Employees' average figure is around 100 hours/person, also including a wide range variation, from 4 to 1,800 hours (an MBA course). The Unemployed also reach more than 100 hours/person, but their range is limited from 5 to 270 hours (figures that are consistent with training programs financed by FAT in this period).

These figures exceed the average VET duration in Brazil that would be around 1% of the working hours yearly (around 2,000 hours), for the industrial formal market, equivalent to 20 hour/people (cf. LEITE, 1996).

In fact, short-term training seems to be a general tendency even in more developed countries. Studies on LLL in France have concluded that most programs are shorter than 40 hours, and there is a trend towards further reduction. (GERME, 2001, p. 10). Another study has found the following LLL duration (average hours for each 1,000 hours of work): 6.4 hours in Belgium, 8.1 in Denmark, 9.9 in Greece, 5.9 in Spain and Ireland, 11.1 in France, 3.6 in Italy, 5.5 in Luxembourg, 12.1 in Holland, 8.7 in the United Kingdom (GREEN, 2001, p. 142).

As a matter of fact, “short” or “long” term in itself does not tell much about training quality or efficiency. Demand-driven VET should look for appropriate duration according to each content or target group. In this sense, short-term programs would be more feasible for adult workers, in terms of time schedule and contents, offering exactly what they need or want to learn. Besides, as case study has revealed, people usually accumulate short programs mainly related to their trajectories in the labor market. This would be “just in time” LLL, at the time and to the extent it could be needed.

15. Where does VET take place?

The case study has shown practical solutions in the firms: VET may be held either in the workplace or in a school or VET center, but specifically in the same city where people work. Another alternative is VET where people live. With a few exceptions, firms cannot afford to keep their employees outside the plant or the city for long time. Executives, engineers and high technicians are the categories that more often receive training outside the company. .

In fact, only six firms have informed they use to send employees to other States for training programs. São Paulo is the most frequent destination mentioned: Transport and Car Sale send people to suppliers' plants in São Paulo (Voigt, Volvo, Lonaflex, General Motors); Groceries promotes visits to suppliers in Santa Catarina, a Southern State; Groceries and Construction send Executives and technicians to congresses and fairs held mainly in São Paulo Capital.

All this training, however, comprises mainly technical visits, conferences and other short-term activities. Exceptions are the larger corporations, like Hotel and Supermarket, which may offer training courses in their corporate schools and/or other units of the same group, located in São Paulo and Campinas (a large city 100 km far from São Paulo). Metallurgy, Mining and Construction promote post graduation programs at São Paulo University (mentioned above in question 9).

16. What are the main incentives and motivations for VET?

With regard to incentives for VET and/or for trained people, the firms were divided into two groups:

- a) on one side, firms – Gas Station, Car Sale, Cellular, Market, Computer, Metallurgy - that do not offer any incentive, except the very opportunity to be trained (mandatory in Gas Station sector); they do not have career policies explicitly valuing VET (nevertheless, it could be said that more skilled people seem to have more job stability, according to data obtained from the Employees);
- b) on the other side, firms – Transport, Solar, Hotel, Construction, Supermarket, Mining - that promote VET, particularly in two ways: by offering courses during work hours and/or by paying part of their costs (in the case of private schools). They also use to value VET as criteria for promotion, salary raise and career inside the firm.

Employees are trained mainly as a result of initiatives (requests/orders) undertaken by their supervisors and chiefs in the firms. This confirms the findings of other studies that show how important these intermediate levels are to stimulate (or not) VET in the firms (cf. LEITE, 1996). Executives and the Unemployed, on the contrary, depend largely on themselves. Executives look for information about VET using the sources available in the firm, in the media (magazines, newspapers) and VET agencies. The Unemployed also rely on media (popular newspapers) and public organisms (Secretary of Labor and Service of Employment).

Executives and Employees have three main purposes when they look for VET: a) to improve skills and job performance; b) to grow inside the firm, in order to get promotions and salary raises; c) last but not least, to comply with requests/orders from the employer. Here, again, the important role of firm policies (and their directives practices) in VET promotion or stimulation is to be noticed.

The Unemployed do believe that VET is important to get a job – even when they do not succeed in their intent. “Getting a job” means to become a formal employee, which is like to win a lottery prize in the Brazilian labor market. For the lower classes of unemployed people, this dream is even more distant, considering their low education standard, their lack of personal and professional references, their overage and the side effects of poverty (such as living in distant and risk areas). Training might help, but would not be a magic solution for their difficulties.

17. What could be the actual benefits from VET?

We have approached VET perceptions and evaluation in two ways: a) by asking people directly about the benefits or effects from VET (considering what they have done in the last 2 years) and then classifying their answers into a list of usual categories in this kind of research; b) by showing a list of statements on VET effects, asking them to assign scale grades from zero to 10, according to the extent of their agreement with each statement (see the next Table).

On a first view, we noticed that in all three groups (Executives, Employees and the Unemployed), there was considerable agreement as to:

- a) VET benefits in terms of job performance, acquisition of skills and abilities, adaptation to new technologies, improvement of self-confidence and self-esteem (these are the same benefits they have pointed out when asked directly);
- b) VET importance for the firms and for the workers, in order to get familiar with new technologies and improve performance;
- c) firms and Government's responsibility - mainly with regard to The Unemployed - for the promotion of training opportunities.

The agreement rate decreases in terms of effective VET return in terms of salary raise, promotion or new jobs. This perception may reinforce the idea that VET (or LLL) should be seen more and more as part of a work trajectory – and not as a requirement to get better jobs or higher salaries. VET should be a routine action, rather than an exceptional event during the working life.

Almost all Executives and Employees believe that VET is important to improve job performance – in terms of quality, productivity, and safety - and to build a career in the firm or in the formal market. This seems to be true: most of them have a rising trajectory in the labor market and more job stability in the firms (present or former), if compared to labor market trends. Salary raises do not correlate with VET demands, but eventually they come with time and promotions.

In general, the average grades are similar in the three groups, but differences are stronger in a few questions: the Unemployed seem to be more afraid of technology, which is understandable, given their present situation and the fact that most of them have never worked in formal jobs. For the same reason, they are more skeptical about VET in a context of shortage of jobs.

Case study in MG: general perceptions and evaluations of VET*

Statements proposed*		The Unemployed	Executives	Employees
BENEFITS/EFFECTS OF VET				
19. VET brings + confidence to look for another job	average	10,0	9,9	9,9
	grades	10-10	10-9	10-8
9. VET improves job performance	average	8,8	9,0	9,7
	grades	10-7	10-8	10-7
2. VET is a chance to learn different things	average	9,5	9,4	9,3
	grades	10-7	10-8	10-7
5. VET helps people's adaptation to NTs	average	8,5	8,9	9,2
	grades	10-5	10-7	10-0
4. VET enhances self-confidence	average	9,6	8,0	9,2
	grades	10-7	10-5	10-6
13. Firms would rather hire trained people	average	6,8	8,0	8,2
	grades	10-4	10-6	10-0
11. Firms would rather promote trained people	average	6,0	7,7	7,6
	grades	10-3	10-5	10-2
12. Trained people usually find more better paid jobs	average	5,9	7,9	7,3
	grades	10-3	10-6	10-0
10. Salary raises are easier for trained people	average	5,5	6,4	6,0
	grades	7-4	10-5	10-0
VET DEMAND/NEED				
16. Firms wants workers to be trained so that their performance is improved	average	8,3	8,7	9,3
	grades	10-5	10-0	10-5
7. New techniques raise the risk of unemployment	average	9,5	4,8	5,5
	grades	10-8	8-0	8-0
14. Firms would rather have people working than wasting time with VET	average	6,0	4,6	5,0
	grades	10-0	7-0	7-0
6. Technology usually complicates the work	average	8,5	2,7	4,9
	grades	10-5	5-0	8-0
1.VET is a waste of time for workers	average	0,0	1,0	0,0
	grades	0-0	1-0	0-0
DIFFICULTIES/OBSTACLES FOR VET				
20. VET is useless if there is a lack of jobs	average	9,4	5,0	7,6
	grades	10-5	9-0	10-0
8. People dislike changes, they would rather do things as they have always been done	average	9,6	5,5	5,6
	grades	10-7	8-0	10-0
3. VET is very complicated for workers	average	3,0	3,8	4,5
	grades	7-0	1-0	3-0
15. Firms do not stimulate VET because they do not want to raise salaries	average	4,1	2,5	4,1
	grades	10-0	5-0	7-0
RESPONSIBILITY/FINANCING				
17. Firms should stimulate employees' VET	average	10,0	9,3	9,8
	grades	10-10	10-6	10-6
18. Government should stimulate workforce VET	average	9,8	5,5	7,3
	grades	10-8	10-0	10-0
21. Firms use to offer too much VET	average	1,1	2,0	4,6
	grades	5-0	2-0	8-0
No. of people		12	7	32

Source: interviews with Executives, Employees and the Unemployed in MG

* People were requested to give grades from 0-10, indicating their level of agreement to the affirmative statements proposed (adapted from the Dominican Republic case study). The number before each statement in the table indicates the sequence in the questionnaire. There was only one Employee (female, VET supervisor) that gave zero to all statements, because she did not accept this method of evaluation (use of scales).

18. How much does VET cost and who pays for it?

Just five firms among the 12 that promote VET have an annual budget for this activity (Hotel, Transport, Supermarket, Metallurgy and Mining). The others allocate funds according to the demand, the categories to be trained and contents to be developed. In nine firms, their budget is the main source for VET.

Additional sources of funds can be partnerships between the firms and:

- a) VET agencies – mainly S System, but also private courses - with discounts and/or scholarships (Hotel, Cellular, Computer);
- b) local government that gave free courses on health education (Cellular);
- c) their Employees (Solar pays 80% of the fees and the Employees pay the rest);
- d) their suppliers (for Gas Station, Transport and Car Sale) that promote technical visits and stages in their plants, mostly in another State (São Paulo).

Present or former employers have mainly financed the Executives and Employees VET during the last two years (and even before). Only one Executive (Solar's owner) and two Employees (in Adventure and Supermarket) have paid all their training costs in the last two years. There were also three cases of costs shared – 70% paid by the employee and 30% by the firm (Metallurgy, Construction and Hotel).

The Unemployed (see question 10) have been trained mainly under public programs financed by FAT. Two of them have paid for training courses in the last two years. Despite being poor, they look for and try to finance occupational updating and refresher courses. VET is highly valued in our “labor culture”, mainly within the lower and middle classes. Low income families do not save efforts to educate their children; young people look for jobs that allow them to finance a technical course or college; they do not give up even facing statistics of educated but unemployed people (LEITE, 2002; SEADE, 2002b).

Based on five firms that confirmed they carried a VET budget in 2002, we can estimate an average annual expenditure of approx. US\$60/employee or US\$76/permanent employee - average figures that seem reasonable for the Brazilian labor market and would be consistent with the estimates presented by Executives and Employees.

Estimates of VET costs presented by Executives, most of Employees and three Unemployed reach an average cost/hour of approx. US\$1 (the Unemployed), US\$4 (Employees) and US\$5 (Executives). These figures seem reasonable in view of our market prices¹⁰, but also reflect differences concerning VET contents and strategies for each of these groups.

19. What is the role of employers in providing or financing training activities?

“Each firm a school” (DOWBOR, 1993; LEITE, 1994c) seems to be a statement fairly consistent with reality. Private employers in competitive firms, mainly medium and large ones, are offering all kinds of LLL both for permanent and temporary employees.

¹⁰ In 1995, in courses financed by FAT the average costs/hour value of US\$1 to US\$3 was adopted as reference for planning, based on research including the S System (mainly Senai and Senac) and around 30 non-degree proprietary schools in São Paulo and Rio de Janeiro (Brazilian currency was then valued at same level as American dollar).

“Supletivos”, basic and operational skills, technology, attitudinal and safety contents are offered in short-term courses (20-40 hours).

Education and training are mostly delivered by VET agencies, but larger firms keep their own schools and training centers operating inside the plant (like Transport, Metallurgy and Mining) or as independent units inside the group (like Hotel and Supermarket). Very large groups (Mining, Metallurgy, and Construction) have agreements with excellence centers (like São Paulo University), in order to graduate and post graduate their professionals.

Suppliers of equipment, machines, systems and materials play an important role in delivering VET for all firms. For the smaller ones, they may be the only VET agency (like Gas Station), to motivate or even compel those who do not seem to be very receptive to education and training (like Gas Station and Transport owners), for reasons of quality and safety. They are also an important source of training outside the firm, as they offer technical visits to their plants (mostly located in São Paulo and Southern States), as well as invitations for fairs and other technical events (mostly in São Paulo).

Nevertheless, each firm might be seen as a “school” in itself. Although they do not support schools or training centers, they usually reserve some room – space and time – for VET inside the plant. Small business owners themselves sometimes take over as teachers (like Solar’s owner). Other firms send their employees to different units of the same group (as reported by Car Sale, Groceries, Construction, Metallurgy) in order to observe and learn or even to “dive” into the firm’s culture.

Actually, on the job learning seems to be important even for more educated people. Most Executives declared that their present skills have been acquired mostly in practice, from supervisors and/or senior workers. Half of the Employees - also people who have technical and higher education – have the same perception. This makes sense, considering that more educated people can learn easier all by themselves.

20. What are the main VET suppliers according to MG case study?

The exploratory research in MG has given many examples of the “invisible LLL non-system” which existence we have assumed for Brazil (see next Table). A great variety of agencies are delivering VET, either to the formal or the informal labor market, employed and unemployed people, in different economic sectors and occupations, from smaller to larger firms and towns – a picture consistent with development of VET market in Brazil and with the tendencies which have been defined since the 80s (CAILLODS and LEITE, 1987; LEITE, 1994c, 1996).

In general, the case study allows us to stress the following aspects:

- a) the importance of S System, mentioned by 8 out of 12 firms that promoted VET in the last two years;
- b) the apparently growing competition between “non degree proprietary schools” and “private consultants” – a new category that emerged in the 90s, formed by experts in different areas – especially “quality” and “human development” – who establish microfirms, frequently based on personal and family relationships;
- c) the space opened by quality certification services (like Dom Cabral Foundation and IBVQ – International Bureau Veritas Quality);

- d) the importance of suppliers to provide VET even for traditional firms, whose owners are not very supportive of human development (like Gas Station and Transport);
- e) the role of technical school and entrepreneurs' associations in the small towns – like Santa Rita do Sapucaí – where VET market is less diversified than in Metropolitan Areas.

LLL Case Study in MG – Main VET suppliers

Systems/groups	Examples mentioned in the case study in MG
S System and entrepreneurs' federations > private	<ul style="list-style-type: none"> ▪ Senai/Sesi (metallurgy, mechanics, welding, Telecurso) ▪ Senac/Sesc (hostelry, tourism) ▪ Senat (urban transportation) ▪ Sebrae (management for small business) ▪ FIEMG - Industry Federation – MG State (management for small business) ▪ Commercial and Industrial Association in Santa Rita (management)
Non-degree proprietary schools	<ul style="list-style-type: none"> ▪ Computers: Informix, Memory, MR Informática, BMW Informática ▪ English Schools: Fisk, Wizard, Number One, Cel Lep, CCAA, Cultura Inglesa ▪ ISO/Quality and management: BVQI – Bureau Veritas Quality International ▪ Treinar School ▪ FDG – Foundation for Management Development.
Schools and academies in private enterprises	<ul style="list-style-type: none"> ▪ Mining, Metallurgy, Transport > schools in the plant ▪ Supermarket – VET school in São Paulo and Campinas ▪ Hotel Academy in São Paulo (corporate university)
Labor unions and professional associations	<ul style="list-style-type: none"> ▪ Building industry union – Contagem ▪ ABM – Brazilian Metallurgy Association
Suppliers > producers/sellers of equipment, systems, materials	<ul style="list-style-type: none"> ▪ Metal & mechanic industries: Volvo, General Motors, Varga, Master Systems, Munck ▪ Oil and gas distribution: Petrobras ▪ Food industry: Sadia
Consultants > individual experts in different areas	<ul style="list-style-type: none"> ▪ Factor ▪ Hey Brasil ▪ Via Brasil
Universities and colleges – private	<ul style="list-style-type: none"> ▪ FVG - Getúlio Vargas Foundation, Rio de Janeiro ▪ Univercity – Rio de Janeiro ▪ Cristiano Ottoni Foundation ▪ PUC- MG - Catholic University – Minas Gerais
Universities and colleges – public (extension departments)	<ul style="list-style-type: none"> ▪ USP - São Paulo University (state) ▪ UNICAMP – State University of Campinas (São Paulo) ▪ UFMG – Federal University – Minas Gerais ▪ UFSC – Federal University - Santa Catarina State ▪ CEFETs – Federal Technological Centers – Minas Gerais and Ouro Preto
Technical schools – public/private	<ul style="list-style-type: none"> ▪ School “Francisco Mariano Costa”, Santa Rita do Sapucaí ▪ School “Carlos Ficatti” – Belo Horizonte ▪ School “Antonio Elias Nahas”, Belo Horizonte
NGOs	<ul style="list-style-type: none"> ▪ Courses mentioned by the Unemployed as “Sine's” courses
Distance education*	<ul style="list-style-type: none"> ▪ Telecurso 2000 (“supletivo) ▪ Globo Editions – English course sold in newsstands (self learning)

Source: Source: interviews with Executives, Employees and the Unemployed in MG

* Distance Education is in fact a strategy or methodology for VET, but we separate it in order to stress its importance and potential for LLL purposes.

As would be expected, the agency may vary according to VET contents and audience (Executives, Employees, and Unemployed). Executives and Employees have mentioned mostly courses delivered by S System, other firms of the same group, non-degree proprietary schools and suppliers or technical assistance. The Unemployed report they are trained mainly by non-degree proprietary schools and governmental organisms, but in fact they do not know

what the VET agency is; most of them only know that they have participated in “FAT” or “Sine” programs that happened to be subcontracted in the VET market, including mainly S System, NGOs, free courses, universities and colleges.

21. What is the size and extent of the “LLL invisible non-system” in Brazil, in terms of costs and people involved?

In order to estimate the size and extent of VET market in Brazil, we have taken into account the results of the case study, in addition to education and labor statistics, recent surveys and former studies. Our most important sources have been:

- a) the VET Census - Ministry of Education, 1999-2000: a survey by mail and Internet, registering almost 4,000 agencies that deliver either in formal and non formal VET;
- b) the VTIs Catalogue - Ministry of Labor, 1998-2000: a survey by mail, telephone and field research, that listed 17,500 VET agencies, mainly engaged in non-formal education;
- c) RAIS – Yearly Social Information – 2000, compiled by the Ministry of Labor, including 2.2 million firms and 26.2 million employees in formal sector;
- d) annual reports and records from different organizations, mainly from S System.

Based on these sources, we have estimated the size of each group of agencies or “systems” that are supplying VET in Brazil (see Appendix). For analytical purposes, our “LLL non system” may be classified into different “systems” or “nets”, considering variables such as legal status, financing, management and type of VET most often supplied.

This analytical classification is shown in the following tables, and has obtained the following figures: 35 thousand schools and centers, enrolling 32 million students, with expenditures of around US\$13 billion yearly. These estimates are mostly based on data from 1999-2000, but is reasonable to assume that no deep changes have occurred since then (see next Table).

We have adopted mostly conservative references (see Appendix), in order to avoid over estimates. In fact, our figures may be underestimated¹¹ mainly for three reasons:

- a) we have not found indicators to estimate capital investments in buildings, equipment, and materials;
- b) we were not able to estimate, given the limits of this case study, public budgets for civil and military clerks’ training (a part of which is also supported by payroll levies);
- c) we have not computed distance education, since part of it – we do not know how much – may be included in different groups (mainly universities, S System and non-degree proprietary schools).

¹¹ According to WB Terms of Reference for this project, written by Claudio M. Castro, extrapolating from estimates presented by Credit Suisse, the LLL activities, at the very least, would double the GNP share of education and training presented by official statistics. From the official number of around 5% of GNP, Credit Suisse pushes up the proportion to 9%. The same source, for instance, estimates at 800 million dollars the revenue of the large English language chain of franchise schools in Brazil.

Anyway, our estimates provide an idea of the extension and importance of VET market in Brazil: the annual expenditure would represent around 2-3% of the total GNP and would be enough to train, each year, around 40% of EAP over 16 years of age.

LLL market in Brazil – 1999/2000: estimates of schools, students, budgets for main VET agencies, according source of statistics about them

Agencies, “nets” or “systems”	Centers/ schools	Students (million)	Annual expenditure** US\$ million
COVERED BY EDUCATION STATISTICS (a)			
1. Universities and colleges – public	190	0.8	2,400
2. Universities and colleges – private	905	1.6	3,600
3. Secondary/technical schools – public*			
▪ non-degree courses (“basic VET”)	480	0.2	65
▪ technical courses	1,000	0.4	480
▪ “supletivos” (see foot-note 1)	15,050	2.7	945
4. Secondary/technical schools - private*			
▪ non-degree courses (“basic VET”)	1,120	1.0	320
▪ technical courses	1,000	0.3	360
▪ “supletivos” (see foot-note 1)	2,250	0.3	105
SUBTOTAL (a)	18,395 (52%)	7.3 (23%)	8,275 (63%)
COVERED BY OTHER STATISTICS (b)			
5. S System	2,700	6.0	2,500
6. Schools and academies in private firms	4,200	5.0	800
7. Labor unions and professional associations	500	1.6	130
8. NGOs – Non governmental organizations	3,000	3.0	240
9. Non-degree proprietary schools	5,000	5.0	800
10. Suppliers – private firms that produce/sell equipment, systems, machines, raw material, components	1,500	2.6	210
11. Consultants > private individuals and micro firms	---	1.3	105
SUBTOTAL (b)	16,900 (48%)	24.5 (77%)	4,785 (37%)
TOTAL (a+b) = 100%	35,295	31.8	13,060

Sources for data and base for estimates (see Appendix):

a) Education statistics: Ministry of Education - educational statistics (MEC/INEP, 2000) and VET Census

b) Other sources: Ministry of Labor – VTIs Catalog and RAIS – Yearly Catalog of Social Data; annual reports from S System and registers from ABONG – Brazilian Association of NGOs.

* The number of schools should not be added up, because the same school may offer different types of course (training, technical, “supletivos”). For this estimate, we considered only the highest figure (15,050 public and 2,250 private schools).

** These estimates do not include investment in infrastructure – buildings, equipment.

22. How much of this “LLL non system” is covered by official statistics?

Our sources include official data from the Ministry of Education, but they are mostly “non official” in terms of LLL, i.e., they are not primarily designed provide data about VET, although they may be used as a basis to estimate it.

Anyway, the “systems” or “nets” computed in our estimates can be divided into two categories, according to their status in the Brazilian education system (see previous Table):

- a) On one side, agencies that are part of formal education system - universities, colleges, technical and secondary schools - but are actually LLL suppliers, as defined in this

project. This group includes 52% of the schools and 63% of annual expenditures, but only 23% of students, since they concentrate most of long-term (longer than 500 hours yearly) programs. This share is fairly covered by official statistics from Ministry of Education as branches or formal education – but not as LLL suppliers.

- b) On the other side, agencies that could be considered mainly VET suppliers - S System, non-degree proprietary schools, firms schools, consultants, unions and associations, producers/sellers of equipment, systems, materials and NGOs - though many of them may offer formal education (in particular “supletivo” and technical courses). These agencies include 48% of schools and centers, 37% of annual expenditures and 77% of students – since they concentrate mainly short and medium-term training courses (40-200 hours).

23. How is this “LLL non system” financed?

Our “non system” is financed by a mix of taxes (including payroll levies), public funds (FAT, Social Assistance Fund), private budgets (from firms and individuals), contributions from associates, donations (including from foreign organizations), sales of products and services. Confirming another project assumption, it is mostly private in terms of management, including three groups of agencies (see next Table):

- a) financed by public budget and managed by governmental organisms - federal, state and municipal universities, colleges, technical and secondary schools = 43% of schools/centers, 13% students and 30% of annual expenditure (mostly long-term courses)
- b) financed by public sources (mainly payroll levies and taxes) but privately managed - S System, entrepreneurs’ federations and labor unions = 9% of schools/centers, 24% of students and 20% of annual expenditure;
- c) privately financed/managed - private universities, colleges, secondary and technical schools; non-degree proprietary schools; firms’ schools and training centers (including suppliers of equipment/materials); NGOs (that may receive public donations) and consultants = 48% of schools/centers, 63% of students and 50% of annual expenditure.

24. How does it work on as a “non-system”?

Being a “non system”, only a small part of this universe is subject to regular evaluation or supervision, even when supported by public funds. Nevertheless, there is consistent coordination inside its most important components, i.e., it does not occur in a totally spontaneous or uncoordinated manner. For instance:

- Universities, colleges, technical and secondary schools are under the coordination of Federal, State and Local Secretaries or Boards of Education, according to the Education Law. They are supervised regularly and there is also a national evaluation of higher education graduates (it was implemented in the later 90s, on a voluntary basis, but students and schools’ participation in the test, which is known as “Provão”, has been increasing).
- S System does not work systematically as whole, but each “Ss” group (for industry, commerce/services, agriculture, transportation etc.) is consistently managed by the entrepreneurs’ federations both at national and state levels.

- Labor unions' schools and centers are managed similarly to the S System, through national and state federations that coordinate their VET departments.
- NGOs are mostly linked to religious or social organizations with national or local coordination: Kolping, Salesian Priests, Rotary, Lyons are examples of it.
- Private enterprises and foundations control their schools/centers, which are mostly demand-driven, i.e., they offer what the firm needs, if and when it may be needed.

Besides that, we should stress that this market has not been developed by an “invisible hand”. Brazilian Government usually makes strong interventions in the VET market, thus creating important sources of financing and incentives that may “drive” our “non-system” in different ways (see question 25).

LLL market in Brazil – 1999/2000: estimates of schools, students, and budgets for main VET agencies, according main source of financing and management (public or private)

Agencies or “systems”	Centers/ schools	Students (million)	Annual budget** US\$ million
AGENCIES FINANCED BY PUBLIC BUDGET AND MANAGED BY GOVERNMENT (a)			
1. Universities and colleges – public	190	0.8	2,400
2. Secondary/technical schools – public*			
▪ non-degree courses (“basic VET”)	480	0.2	65
▪ technical courses	1,000	0.4	480
▪ “supletivos” (see foot-note 1)	15,050	2.7	945
SUBTOTAL (a)	15,240 (43%)	4.1 (13%)	3,890 (30%)
AGENCIES MAINLY FINANCED BY PUBLIC FUNDS AND PRIVATELY MANAGED (b)			
3. S System and entrepreneurs' federations (payroll levies)	2,700	6.0	2,500
4. Labor unions and professional associations – private (union tax)	500	1.6	130
SUBTOTAL (b)	3,200 (9%)	7.6 (24%)	2,630 (20%)
AGENCIES MAINLY FINANCED BY PRIVATE FUNDS AND PRIVATELY MANAGED (c)			
5. Universities and colleges – private	905	1.6	3,600
6. Secondary/technical schools - private*			
▪ non-degree courses (“basic VET”)	1,120	1.0	320
▪ technical courses	1,000	0.3	360
▪ “supletivos” (see foot-note 1)	2,250	0.3	105
7. Schools and academies in private firms	4,200	5.0	800
8. NGOs	3,000	3.0	240
9. Non-degree proprietary schools	5,000	5.0	800
10. Suppliers	1,500	2.6	210
11. Consultants	---	1.3	104
SUBTOTAL (c)	16,855 (48%)	20.1 (63%)	6,540 (50%)
TOTAL (a+b+c) = 100%	35,295	31.8	13,060

Sources and notes: see previous table

25. How this VET market has been developed?

The VET “systems” or “nets” in Brazil are not much different from many other countries in Latin American. The difference is that in Brazil they have survived the 70s' and the 80s'

crises, when VET systems failed or weakened in the region. In fact, VET in Brazil has not only survived, but has also experienced growth and modernization since then.

There are many reasons for this peculiar development of VET in Brazil. Some of them are mentioned in the WB Terms of Reference (p. 1) and confirmed by case study in MG: *“... a response to fast changes in the economic system that require new skills in many areas... a dramatic effort to patch up the skills poorly acquired from a deficient system of academic education... a training system that does not reach all those who need it...the overage of a preponderant proportion of students in the academic systems...”*

Indeed, Brazil recorded high growth rates for about four decades (1950-80). During most of that period the country was under dictatorial and/or populist governments, either civilian or military, but all with the same concern: national development. They have invested in infrastructure (railroads, steel and iron industry, electric energy) and in the substitution of durable imported goods (trucks, cars, refrigerators, TVs, etc.).

The industrial development has brought about an expanding cycle of commerce, services and urbanization. Brazilian economy grew around 7% annually from the 60s to 80s, boosting the demand for skilled workers in all sectors. Unfortunately, education rates did not follow the economic performance and the country had to get along with an illiterate or poorly educated workforce. VET would certainly have helped them out.

At the same time, the Brazilian governments, either civilian or military, implemented policies and programs that stimulated VET for different sectors and population groups. Some of them have already been dismantled but their side effects are still felt, for instance the tax rebate scheme that has stimulated firm-based training for 15 years (1975-90). But other have lasted until now, supporting large-scale public and private VET suppliers. The most significant, as far VET is concerned, are: the compulsory payroll levies that have supported the S System since 1942; the FAT – Fund for Workers’ Assistance since 1990; the new Education Law (LDB) since 1996.

Payroll levies were enforced in Brazil in the early 40’s and have survived until now with little changes. Their most important effect is the development of S System mentioned above, one of the biggest and best structured suppliers of VET in the country. Since the 80s and mainly after the 90s, different plans and projects have envisaged the reform of the tax system to reduce the so-called “Brazil Cost”. To this effect, they have been proposing to reduce or eliminate payroll levies that are supposed to increase labor costs. Compulsory levies, however, have been resilient to all attempts to eliminate them. Powerful lobbies in the Congress and a strong popular appeal have succeeded to stop these projects.

FAT – Fund for Workers’ Support was established by the Brazilian Constitution of 1988 and was regulated in 1990 to finance public policies of employment, including VET. FAT consists of public funds formed by social taxes paid by public and private enterprises (PIS and PASEP) based on their profits and sales. The Fund is managed by a tripartite board (CODEFAT), which gathers representatives of labor unions, entrepreneurs and government institutions.

In 1995, FAT’s equity was around US\$15.9 billion, growing to US\$27.1 billion in 2001 (cf. MTE/CGEM, 2002). FAT’s average annual budget for employment policies was of approx. US\$ 4.3 billion in years 1995-2002, managed by Ministry of Labor. Around 4% of this budget has been reserved for training programs for the unemployed and other vulnerable people,

delivered through Planfor – National VT Plan; another 3% have been allocated to Sine – the Public Service of Employment. Actual expenditures, however, have remained far below the each year’s approved budget, given the economic policies aiming to control inflation rates and reduce public debt. Anyway, FAT has invested an expressive amount in VET (see question 10).

In December 1996, a new Education Law (LDB) replaced the former one enforced by military government in 1972. The new Law aimed to update strategies and correct former biases through innovations in the Brazilian educational system, such as:

- a) the definition of “basic education” as 11 years of schooling, including primary and secondary school for children and teens from 7 to 18 years old;
- b) the elimination of compulsory technical certification at secondary level;
- c) the creation of vocational education (VET) as part the educational system, not substitutive for primary nor for secondary school, but as a modality of LLL and an alternative for higher academic education;
- d) the recognition of long-distance education as an alternative to formal learning.

In order to implement this new concept of VET, the Ministry of Education has launched the PROEP – Program for VET Expansion and Modernization – to be in force for the period 1997-2003. PROEP’s main objectives are to improve quality and diversify VET offer, in order to strengthen its relations with the labor market and to contemplate the community needs. PROEP has supported projects for expansion and modernization of buildings, equipment, supervisors and teachers training, curriculum and didactic material upgrade to achieve such goals. Federal budget (25%), FAT (25%) and IDB (50%) should finance these projects¹².

These programs and projects illustrate how and how much Brazilian government has been stimulating and financing VET. Brazil could be said not to carry any public VET policies “stricto sensu”, but there have been strong interventions that contributed to create, expand and modernize the VET market.

26. Are there any links between the LLL “non-system” and educational system?

According to the Education Law, Brazilian educational system is structured in three levels:

- pre-primary = crèche and kindergarten for children from 0-6 years old,
- “basic” = primary school (8 years, for children from 7-14 years old) and secondary school (3 years, for teens from 15-18 years old);
- higher education = universities and colleges (2-5 degrees).

¹² Until 2002 PROEP had approved of 230 projects and 33 had already been implemented. Total investments until 2003 were expected to reach US\$190 millions, including: the modernization and upgrade of federal technical schools - 49 projects representing 21% of the investments; restructuring and modernization of secondary and technical state schools - 88 projects representing 33% of the investment; expansion of community centers, in partnership with enterprises, trade unions, municipalities, NGOs and free VTIs - 93 projects, 46% of the investments. PROEP has given special attention to this community sector, with an eye to innovating VET methodology in Brazil (cf. www.mec.gov.br).

The same Law has defined VET - Vocational Education as an independent branch, consisting of three alternatives:

- non-degree courses (named “basic VET”)
- technical courses, that may be attended by people enrolled at secondary school or graduates from this level, offering technical diplomas;
- “technological courses”, that are actually college education, post secondary.

Given this picture, we might say that an expressive share of our “LLL non-system” is part of the formal education system or is formally linked thereto (see also question 22), through higher and technical education, and also “supletivos”, that are certified as primary or secondary adult education.

Nevertheless, most of our “non-system” is not linked to formal education by definition, since it consists of non-degree short and medium-term programs. The Education Law has established that there should be a national system to certify the abilities and knowledge acquired in these courses or even “tacit skills”, but it has not been designed until now¹³.

27. To what extent does this “non-system” compensate for the shortcomings of the regular educational and training system?

The formal market is not recruiting low educated people; actually, secondary education seems to be the minimum required even for less demanding jobs in trade and services. Public Employment Services in Belo Horizonte and other Brazilian metropolis confirm this trend.

Illiteracy among formal employees is very close to eradication, but most sectors still keep a significant proportion of people under secondary or even primary level. For them, competitive and larger firms are offering “supletivos”, mainly using Telecurso 2000, or looking for partnership with public schools, universities and the S System.

VET efforts in most firms, however, do not seem to be essentially compensation for low education. In fact, they seem to be responses to demands arising out of new technologies (equipment, machinery, systems, materials), quality “philosophy” and tools disseminated by the so-called “Japanese” method (statistical control, just-in-time, kanban, risk management, total safety, priority to clients/consumers).

The efforts towards ISO certifications, valuable as “quality labels” both in the domestic internal and external markets, also lead the larger firms to deliver a lot of training and to invest in education: illiteracy, low education and high occupational accident rates pull down the firm score for ISO certificates.

We observed in the case study that firms are mainly training people in specific areas (operational skills and technologies) that are not supposed to be learned in formal school. Indeed, a good educational basis would be helpful: statistical control is easier for people who are familiar at least with basic math operations; every learning process tends to be easier for those who are able to read and understand a simple text; politeness and communication are essential to develop the ability of “charming” the client.

¹³ This system has been included in the PROEP mentioned above and has been discussed until 2002, but little progress has been achieved in terms of implementation.

28. What is more cost-effective in each situation, to improve regular education or to offer LLL?

This should not be a choice, since education and training have become essential components of employability both in formal and informal labor markets. Education – at least at secondary level – and LLL are conditions to be modern and competitive. Education provides the basis that makes people trainable and help them learn easier and faster. LLL is for life.

Indeed, concerning low educated people (like the unemployed and informal workers), priority should be given to education, not only as a basis for LLL, but also as a means to reinforce their employability. In an economy where informal labor represents more than 50% of the EAP, formal and informal are not separate worlds, since most of productive chains are integrated by permanent, temporary, domestic and odd jobs. The improvement of education and skills of the whole EAP – including informal workers – might be a way to upgrade labor force performance as a whole.

For instance: Adventure is an innovative firm, in a modern sector (extreme sports, ecological tourism), that usually hires local temporary guides at tourist sites. Its owner needs better training for such guides – not only should they know the region, they should also be familiar with its history and culture, and should be able to communicate properly with people (including foreigners who do not speak Portuguese). Adventure cannot afford it. Who is going to train them?

29. Who is left behind in our “LLL non system”?

It is a fact that, as is the case of many other services in Brazil, LLL supply is not well distributed, being absorbed mostly by formal employees in more dynamic sectors, as illustrated by the case study and former similar studies. Private firms effectively seem to take care of their people. Whether motivated by proactive policies or by constraints from competitors/suppliers, they try to keep their employees – even the temporary personnel – in line with the latest requirements in their sectors. With a few and atypical exceptions, they assume that VET is part of the process of becoming modern and competitive.

As far as LLL is concerned, gender, age and race biases do not seem to interfere in the firms' policies. Women, elders, black people are being trained – if and when they succeed in getting skilled jobs – which is another question, obviously affected by the unequal distribution of income and opportunities in Brazilian society.

According to the case study, three groups have more limited access to training opportunities, despite being in active labor market: small entrepreneurs, their employees and informal workers (mostly the black, low educated and poorer people).

Small entrepreneurs face a double problem: lack of time (as they are used to act as employer and employee at the same time) and money, since they depend on their profits to finance their own VET. Adventure and Inn owners illustrate these difficulties: they would like to take specific courses in their areas (tourism, hostelry), but are short of time and money. They would like to promote VET for their employees but they don't, for the same reasons and in view of non-existing options nearby.

In fact, location can make the difference: Adventure is in the big city (Belo Horizonte) and succeeds in recruiting trained people in the market, at least for office trades. But Inn is in a small city (Caetés) and has to work with the local workforce. Cellular and Computer do not face this problem because Santa Rita is a small town, but has grown to be an electronic pole, with good infrastructure of VET (Senai, technical schools).

The entrepreneurs' profile also plays an important role: family, social capital and information are well known ingredients for a successful small business. Solar's owner illustrates this profile: she knows what, who and where to turn to improve business (she is the only one who used Sebrae's and Senai's assistance for small entrepreneurs; she even traveled abroad – Germany – to take a course that was important in her area). Gas Station owner offers a different example of a conservative entrepreneur that would not promote any kind of VET - she herself is low educated and states that too much education would be a problem, inasmuch as it would create pressure for higher salaries. Even so, safety laws and competition procedures determining that suppliers should train gas stations workers constitute, alone, a benefit to her employees. Technical training is consequently followed by attitudinal development (attention to client, how to persuade people to buy a new product and so on).

Concerning informal workers, they can only be trained if they are included in public programs. Training would be not an isolate solution for them, but might improve their employability and contribute to raise quality, productivity and safety even in informal jobs.

30. What is the role of the public sector in regulating or stimulating these activities?

Notwithstanding the case study focus on a single Brazilian state, we consider these recommendations possibly valid for most of the urban-formal economies in the country, since our main findings are consistent with more general trends registered in recent studies and surveys throughout the country. Most ideas listed below are not original, since they have been frequently stressed by specialists (CASTRO, 2002), politicians and the media.

- a) Improve basic education, aiming to eliminate illiteracy, and increase EAP education level at least to primary education (8 years). Absolute illiteracy is decreasing in Brazil, but functional illiteracy is still high. More than 25% of EAP over 16 year of age do not complete more than 3 years of education, which means almost 20 million absolute and functional illiterates (people unable to read, write and understand a short simple text). Besides that, 33% of EAP has 4-7 years of education, which means less than Primary level. These proportions mean that 60% of EAP (45 million people) do not satisfy the minimum requirements not only to work, but also to be actual citizens. Firms take care of undereducated employees, but most low-educated people are never given the access to the firms. The good news is that Brazil has the educational technology, installations and also funds to face this problem through the mobilization of public and private initiative¹⁴. A massive educational effort would have an important side benefit for the country: it would

¹⁴ For instance: Telecurso 2000, already mentioned, "Integrar" (developed by CUT – Labor Central Union), "Trabalhar" (developed by Sinduscon - Building Industry Union in Rio de Janeiro), "Alfabetização Solidária" (Comunidade Solidária) and Senar methodologies for rural workers. Actually, S System could be more proactive in this field, through its "Social Ss", that are richer than "Vocational Ss" and have first class installations (clubs, theatres, libraries, cultural centers) all over the country.

generate jobs in the short range, for teachers, supervisors, administrative clerks and other occupations within the education and training chain.

- b) Improve quality of primary and secondary education in public schools. Primary school is almost universalized, but most of its graduates are unable to read, write and make simple calculations. Brazilian students' scores are at the bottom of international test rankings (like PISA). This would demand a massive effort to increase educational level and skills of primary and secondary schools' teachers, mainly in the less developed regions, where an expressive part of them are still under the minimum standard defined by Education Law. Distance education projects for teachers graduation have shown good results in São Paulo, Minas Gerais, and Paraná and are ready to be expanded for other States.
- c) Improve digital inclusion programs for adults. Digital inclusion projects have been increasing in the past years, to the benefit of public schools and excluded populations, mainly children and teens¹⁵. What about people over 30 years old? They still have at least 30 years of working life ahead, in a context where computers and terminals will be part of daily routine. Teachers' education should include digital literacy, in order to take profit of the computers available in the schools (it is not difficult to find out computers packed for more than one year in public schools even in developed States like São Paulo and Minas Gerais).
- d) Enlarge alternatives of VET for informal labor market, stressing basic skills. The majority of the Brazilian EAP is active in the informal market and has little chances of getting formal jobs, where the employers provide education and training. They do not make much money, but they are in the market, as workers and consumers. Informal jobs are presently building, driving, feeding, nursing, cleaning, cashing, porting and loading the country, which goes on bearing high costs of low productivity, misuse, mistakes and casualties. Informal economy, however, does not consist only of urban odd jobs. Countries like Brazil have a vast array of activities that used to be traditional, but which are becoming part of modern chains, for instance: ecological and ethnical handicrafts, organic cultivation of spices and herbs, collection of medicinal plants, fishing and sea food farming, ecological tourism, recycling, popular arts and events like Carnival, June Feasts and religious events. These activities are proving to be viable alternatives for sustainable development, job generation (either permanent or temporary) and income through self-employment, domestic work, cooperatives and family production. In order to be profitable and succeed, they need more than traditional knowledge. Education and skills can make a difference. Public funds – like FAT and the Social Assistance Fund – are available and could be used to train workers.
- e) Improve integration among public training, employment services and micro credit. Planfor results and failures (see foot-note 9) have shown that VET should not be proposed as an isolated policy, but as a component of a public policy for economic development and social protection. Concerning informal workers and unemployed people, it is important to build bridges between the “LLL non-system” and labor market. These bridges could be the Employment Service agencies¹⁶, micro credit agencies and also VTIs, such as the S

¹⁵ Examples: “Sua Escola a 2000 por hora”, Ayrton Senna Foundation; Senac Digital; Mac Donald AOL, Pitágoras in Belo Horizonte etc.

¹⁶ Sine receives 3 candidates for each available job, but no more than 50% of these jobs are filled. In 2001, Sine registered that almost 700,000 jobs in formal labor market remained vacant (25,000 in Minas Gerais). The main problems are mismatches between labor market requirements and the

System, which has strong ties with productive sector. This would lead to training programs with an improved focus. If VET is well focused and graduates get a job or a regular source of income, a kind of payback might be feasible, i. e., people would be able to pay for the training they have received.

- f) Improve distance education, e-learning, self-learning. If an education basis, essential skills and literacy were provided, it would be possible to improve distance education as an alternative for LLL. This is another field where we have available technology and infrastructure¹⁷, but its expansion has been limited by low education of EAP, government bureaucracy, public projects with no assured continuity and powerful lobbies at Federal and State Boards of Education. Distance education certainly will never be a replacement for classes and schools, but is capable of reaching more distant and isolated populations, especially in rural sectors and may be the only feasible alternative for universalizing secondary education and enlarge higher education opportunities in Brazil – two priorities of present Government.
- g) Evaluate VET offer. VET market is huge and diversified, but only a part of it – universities and colleges – is going through some kind of educational evaluation on a regular basis. Nationwide tests for VET would hardly be feasible. A national certification system does not seem to be a practical solution¹⁸. This kind of system is generally complex, expensive and elitist, i.e., may contribute to raise social and labor exclusion, a serious problem in our context of social and economic inequality. Nevertheless, the idea of certification has already shown good results in well-defined sectors¹⁹. Besides, suppliers' evaluation seems to be more feasible. The VTI Catalogue, implemented by MTE/FAT, had this objective: not only to register the agencies, but also to evaluate their conditions to offer training programs. This kind of evaluation was initiated in several States (Paraná, Rio Grande do Sul, São Paulo, Minas Gerais, Ceará, Pará), where the Catalogues were used to guide the subcontracting process for their State Plans of VET. VTI Catalogue has about 17,500 entries of registered agencies; among them, 3,000 were subcontracted to deliver VET programs in the years 2000-2002. Each State, in its Secretary of Labor, has records of the technical and administrative performance of these institutions, their training methodologies, installations, equipment, didactic material and teachers; in many cases, surveys have shown what happened to their graduates in the labor market. This could be a starting point to have a global evaluation process implemented

candidates' profiles (mainly low education, lack of experience/references, and basic and specific skills).

¹⁷ The first census of distance education in Brazil, recently completed, disclosed results far beyond any prior estimates: in 2002, there were recorded 84,700 students in 60 high level distance courses in 22 institutions all over the country – considering only official data from the Ministry of Education. Including non-official sources, one might estimate that 1.2 million people participate in distance courses all over the country, investing around US\$80 millions each year (VIANNEY et alia, 2003).

¹⁸ In fact, a Brazilian National Certification System exists by law since 1994, coordinated by INMETRO – Brazilian Institute for Metrology and Certification (there have been other projects since the 80s). But it has partially succeed only in certifying products and services. Peoples certification is still under endless debates.

¹⁹ Instituto de Hospitalidade, a NGO located in Bahia, has designed and implemented a certification system for basic occupations in the tourism chain (chambermaids, guides, receptionists, waiters, inn managers, chiefs and maîtres). Mechanics and welding have their own certification system, jointly with Senai centers, private firms and professionals' associations. Many other similar experiences are working on in Brazil (OIT, 2002).

and to produce a sort of catalogue of the best agencies to guide firms and people in their search for VET.

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**APPENDIX: BRAZILIAN LLL “NON-SYSTEM”
SOURCES AND REFERENCES FOR ESTIMATES**

Systems/ groups	Data, estimates, sources and references
S System and entrepreneurs federations > private	<ul style="list-style-type: none"> ▪ Number of schools and training centers: 2,700 (including trucks, containers, buses and other types of mobile units), mainly maintained by Senai/Sesi and Senac/Sesc. Senar works mainly in the rural unions and job places. Sest/Senat works in the same way, but has also net of stands along the main national roads. ▪ Enrollments: 6 million (90% in short term training courses) ▪ Annual budget: 2.5 billion ▪ Source of data: annual reports Senai/Sesi, Senac/Sesc, Senar and Senat/Sest in 1999-2001. Sebrae does not publish reports or statistics. Its budget was estimated as equivalent to Senai – the bigger S. We did not consider enrollments for Sebrae to avoid duplication, since it operates mainly in partnership with Senai, Senac and other institutions (universities, colleges and technical schools).
Non-degree proprietary schools	<ul style="list-style-type: none"> ▪ Number of schools: 5,000 ▪ Number of enrollments: 5 million ▪ Investment: US\$800 million ▪ Base for these estimates: for schools and enrollments, we considered data from VTIs Catalog - Ministry of Labor and VET Census - Ministry of Education (see Appendix B). For investments, we considered an average course of 80 hours/student, costing around US\$2 each hour.
Schools, academies and training centers in private enterprises	<ul style="list-style-type: none"> ▪ Number of firms that maintain schools, academies and training centers: 4,200 ▪ Number of enrollments: 5 million ▪ Investments: US\$800 million ▪ Base for these estimates: RAIS-2000 registers 5,200 firms over 500 employees, employing 10 million workers (formal employees). Based on case studies and former surveys (LEITE, 1990, 1996), we estimate that 80% of these firms have at least a training sector, that VET is promoted for at least 50% of their employees, and that its offer is in average of 40 hours yearly, with costs of around US\$4 per hour.
Labor unions and professional associations	<ul style="list-style-type: none"> ▪ Number of schools and training centers: 500 ▪ Number of enrollments: 1.6 million ▪ Investment: US\$130 million ▪ Base for these estimates: for schools and enrollments, we considered data from VTIs Catalog - Ministry of Labor, VET Census - Ministry of Education and statistics about labor unions from Seade/Dieese (2000). For investments, we considered an average course of 40 hours/student, costing around US\$2 each hour.
Suppliers > producers/sellers of equipment, systems, materials	<ul style="list-style-type: none"> ▪ Number of suppliers offering training to clients: 1,500 firms ▪ Number of people trained: 2.6 million ▪ Investments: US\$210 million ▪ Base for these estimates: we considered 80% of total firms with over 1,000 employees (1,900 cf. RAIS 2000), delivering VET for at least 10% of total employees in the formal labor sector (26,2 millions cf. RAIS 2000), 20 hours/employee, US\$4 per hour.

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continuation

<p>Consultants > individual experts in different areas</p>	<ul style="list-style-type: none"> ▪ There is no base to estimate the number of consultants, since a number of them work as individuals in the informal market. In principle, any professional could become a consultant, depending on the demand and on his/her profile. This new market is open to psychologists, sociologists, writers, clergymen, astrologists, engineers, and economists, among others. ▪ It is reasonable to assume, however, that consulting programs would involve at least 1.3 million people in the labor market (5% of formal employees, cf. RAIS 2000), offering 20 hours of courses/assistance by each employee, costing around US\$4 each hour.
<p>Universities and colleges – private and public (extension departments)</p>	<ul style="list-style-type: none"> ▪ Public universities/colleges: 192 institutions, offering 3,500 courses, enrolling 832 thousand students in undergraduate, post graduate and extension courses, expending around US\$3,000 per student yearly ▪ Private universities/colleges: 905 institutions, offering 5,400 courses, enrolling 1.6 million students in undergraduate, post graduate and extension courses, costing around US\$1,500 to US\$3,000 per student yearly = US\$2,250 in average ▪ Source for these estimates: statistics from Ministry of Education (MEC/INEP, 2000) provide the number of schools, courses, enrollments and public expenditure in higher education. For private investment, we considered average fees of US\$130 to US\$250 monthly.
<p>Technical schools – public/private</p>	<ul style="list-style-type: none"> ▪ Total “basic VET”: 1.6 thousand schools (70% private), offering 16 thousand courses (80% private) for 1.2 million students (80% in private courses), investing around US\$320/student yearly (an average course of 80 hours X US\$4/hour). ▪ Total technical courses: 2 thousand schools (50% private), offering 4.6 thousand courses (50% private) for 670 thousand students (40% in private courses), investing around US\$1,200/student yearly (an average duration of 600 hours X US\$2,00/hour) ▪ “Supletivos”: 17.3 schools/courses (87% public), offering 3 million enrollments (90% public), investing around US\$350/student yearly (the average cost of a regular student on secondary public school, cf. MEC/INEP, 2000) ▪ The number of schools should not be considered jointly, as the same unit may offer all types of courses: “basic VET”, technical courses and “supletivos”. ▪ The figures above do not include S System schools/courses estimated that could offer the same type of courses, but they might include part of non-degree proprietary schools mentioned below. ▪ Source of these estimates: statistics from the Ministry of Education (MEC/INEP, 2000 and VET Census-1999) provide the number of schools, courses, enrollments in “basic VET”, technical courses and “supletivos”.
<p>NGOs – Non governmental organizations, private not for profit</p>	<ul style="list-style-type: none"> ▪ Number of schools and training centers: 3,000 ▪ Number of enrollments: 3 million ▪ Investments: US\$240 million ▪ Base for these estimates: for schools and enrollments, we considered data from VTIs Catalog - Ministry of Labor, VET Census - Ministry of Education and Gife’s Catalogue (1999), Informs from ABONG – Brazilian Association of NGOs. For investments, we considered an average course of 40 hours/student, costing around US\$2 each hour.