

# *training, labour and knowledge*

*The Latin America  
and Caribbean experience*

Cinterfor/ILO

International Labour Office



**CINTERFOR**

Montevideo, 1999

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First edition: Montevideo, 1999

ISBN 92-9088-087-9

**CINTERFOR**

Training, labour and knowledge. Montevideo, 1999.  
100 p. (Papeles de la Oficina Técnica, 7)

Documento presentado a CINTERFOR. Reunión de la  
Comisión Técnica, 34, Montevideo, 1999.

ISBN 92-9088-087-9

/FORMACION PROFESIONAL/ /TRABAJO/ /CONOCIMIENTO  
TECNICO/ /REVISION DE CONOCIMIENTOS/ /POLITICA DE  
FORMACION/ /PARTICIPACION DE LOS TRABAJADORES/  
/AMERICA LATINA/ /CARIBE//PUB CINTERFOR/

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Hecho el depósito legal núm. 309.450/99

Impreso en los talleres gráficos de Cinterfor/OIT

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# Introduction

## Expressions of change

As of its creation, in 1963, Cinterfor/ILO has committed the best of its resources and human and institutional potential to follow and contribute to the production and acquirement of knowledge on training, education and labour. To do so it has made relevant Latin American and international research, reflection and dissemination regarding policies, strategies, practices and experiences in these areas one of the fundamental pivots of its programmes.

In a world typified by the vertigo of change and organised around the spiral of knowledge, the amount and complexity of innovations, searches and efforts developed by the multiple players who act today in the universe of training require constant systemisation -always threatened by obsolescence- if one wishes to take maximum advantage of them and recover them for collective learning and advancement. This document is a new manifestation of this commitment to the generation of synergies among countries, institutions, and key players in the area of vocational training and technical education and its purpose is to describe and analyse what is happening at present in Latin America and the Caribbean in these fields.

With this objective in mind it would seem that the simplest resort would be to compare with the past. However, upon first beginning along these lines, it becomes evident that the central question can no longer be, what has changed in the occupational training of the region?, but rather, what has not changed? And the fact is that only few aspects -in form, content or concept- have not changed during the last 25 years. Furthermore, in no century in history have there been so many and such intense social transformations as in the 20<sup>th</sup>.

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**Society, the pivots which structure its development, its morphology and the coordinates of space and time are quantitatively and qualitatively different.** There is no longer any doubt as to the role played by knowledge in development. Economies are no longer based solely on the accumulation of physical capital and human resources: there is a need for a solid base of information, learning and adaptation. Scientific research results in technological innovation, new products appear, inputs are replaced, innovative production techniques are discovered which allow resources to be economised and costs to be reduced, etc. **Knowledge becomes the basis of human labour and has the power to create a new society: the cognitive society or the society of knowledge.**

Globalisation of exchanges, new communication technologies, the vertiginous development of computerisation and the decline in the cost of the services it makes possible are doing away with frontiers and shortening distances and time. The farthest village has alternatives to access a worldwide accumulation of knowledge so vast as to be unimaginable only fifty years ago, and it can also do so faster and more cheaply than anyone would have imagined two decades ago.

6 As a result, education becomes the centre of cognitive society and its functioning and basic values must be, increasingly, a motive of interest and involvement of all society's players. Everything points to the acquirement of knowledge in the society of knowledge becoming like the possession of property and wealth in the capitalist society. Likewise, the technological impulse has also allowed the development of non-conventional pedagogical methods (various forms of long distance education, including: television, interactive education, multimedia resources, etc.), that open up learning opportunities to millions of people who, otherwise, would have no access to satisfactory education.

But, at the same time, these possibilities are far from being available to all on an equal basis, besides which they require radical modifications of the type, combinations and quality of knowledge needed. The intensity of the spread of information cannot hide that there are vast areas of our continent that still lack electric light and potable water or schools where chalk and books are scarce. For poor people, the fruits of the information era -*knowledge for all*- continue to be out of reach. The inequalities in the capacity to generate knowledge are still greater than those in income, and what definitively distinguishes the poor from the rich -be they people or countries- is no longer

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limited to their having less capital, but also less knowledge and of a poorer quality, which is to say that the difference in income among nations and individuals depends on the degree of success which they have been able to bring to bear to the acquirement and use of knowledge. The latter, in today's world, defines economic transactions, determines commercial trading, orients markets, determines technologies and productive systems, but it also makes viable the quality of life and of social linkages. The poor countries have less institutions and tools to gather and disseminate information on transactions, technologies and market prospects, to certify the quality of their products, but also to ensure the relevance and updatedness of their educational and health services, and even to generate and transmit the knowledge and information which allow free expression of the citizen's will and transparent functioning of political control mechanisms.

There does not, therefore, seem to be room for doubt that, on the eve of a new millenium, promotion of economic development, improvement in the life style of citizens and countries, enjoyment of better health, provision to young generations of an education of better quality and greater relevance, preservation of the environment, require finding the resources and ways in order that **everyone**, men and women, young people and adults, countries and regions alike, may: *access, learn and communicate relevant knowledge*. To do so it is necessary to search for and adapt the knowledge available in other places in the world and encourage local generation; to ensure basic universal education and the creation of life-long educational opportunities, as well as to promote tertiary education and take advantage of all the possibilities of information and communications technology.

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Lastly, **knowledge, in its technological specificity and in its multidisciplinary aspect, radically modifies the morphology of society, encouraging the irruption of a "network society," and alters the space and time coordinates, incorporating a virtual space and atemporal time culture.** Networks, as sets of bodies, centres, institutions, apparatus, physically separated but connected with each other, on the basis of common codes of communication and complementary or articulable objectives, become the organisational methods and/or the appropriate instruments for an economy based on innovation, globalisation and decentralisation or for enterprises which are based on flexibility and adaptability.

Two thousand seven hundred years after the discovery of the alphabet, which made rational discourse possible and broadened the world, freeing it from objects and relationships among speakers, television allowed text, image

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and sound to be integrated into a single system and, in the second half of the nineties, multimedia provides the merging of mass communications media with the power of interaction and extends the scope of electronic communications to everyday life, work, school, leisure, etc. The result: a radical and definitive transformation of culture and the blurring of frontiers between materiality and virtuality, between yesterday, today and tomorrow.

**The division and the nature of labour have changed.** The expected impact of automation, computer science, robotics and the development of telecommunications have unleashed the “third industrial revolution”, which co-exists with high world unemployment. It is estimated that, in the U.S. alone, ninety million jobs are on the way to being replaced by machines in the immediate future. The technological impact, however, is not only circumscribed to industry, since biotechnology radically transforms agriculture and telecommunications and information science the services sector. We are witnesses to a meshing of information technology with the Life Sciences, and a good example is the appearance of a new field -called “*pharming*”- arising from cloning and which, by introducing genes in the genetic code of animals, transforms them into chemical factories.

8 This merging of computer science and biotechnology questions the mass labour which was distinctive of the industrial revolution and has such a large productive capacity that it is increasingly difficult to find an effective demand for it, especially when the purchasing power and number of workers also decline constantly. We must add to that the tendency towards a reduction in vertical integration, through externalisation of the support services of production -formerly carried out internally by the firm and by its regular staff- and even of parts of the productive process. Therefore, the boundaries between the traditional sectors of the economy and, therefore, the very division of labour change and everything indicates that they will continue to do so in an unforeseeable manner.

In the second half of the 18<sup>th</sup> century, in Europe, economists and engineers, with Adam Smith as their figurehead, defined work as the performance of a set of elementary productive operations which could be made objective and defined precisely, regardless of the person performing them. This definition of labour violently disrupted the way in which professional activity was lived and practised by the artisans who produced the product with the knowledge acquired and implemented by the individual. This definition of labour as a sequence of operations generated a radical break between an object called work and another called worker, defined as a work



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force with a certain energy and ability, capable of taking on the performance of those operations. In this scenario, what qualified workers was only their capacity to adjust to the operations they needed to perform as employees, subordinate to an employer. This double definition of work and worker led to the notion of a build-up of labour productivity: physical productivity - velocity of performance and speed in the linking of operations- and economic productivity, which translates as a decline in the unit value of each product thus produced.

Frederick W. Taylor, an engineer economist, gave practical interpretation to this conceptual structure, and the entire so-called “Taylorist system”, based on the division between conception and execution of labour, is nothing but an instrumental application of the ideas of Adam Smith. By Taylorist organisation is meant the rational organisation of mass-production industry which seeks to define and divide, with a maximum of precision, jobs and tasks in order to control the labour involved. It is a system that seeks to do without labour as a subject.

While the increasing evolution of demand, which characterised the past, allowed standardisation both productive -economies of scale- and commercial -distribution networks- today, the increasing differentiation required and the impossibility of keeping considerable “stocks” of heterogeneous products, demands customised production. The latter requires an adjusted interlocking between technological progress -that offers answers and solutions to these new demands- and modernisation of operational and commercial management. Among the many changes required by this process, the replacement of Fordist-Taylorist type rationalisation can be affirmed, as well as its substitution by a new industrial production model based on flexibility and new methods of organisation of work adapted to ever-changing and heterogeneous markets or soft technologies. This “new industrial organisation paradigm” demands a double reading of technological change. From a diacronic standpoint we need to keep in mind that the change is neither sudden nor generalised, the new machinery soon becomes obsolete, but, moreover, that the new systems are not implemented instantaneously and completely but rather co-exist with the old production systems, generating imbalances and unevennesses in the industrial modernisation process. In turn, a synchronous reading reveals that the consequences of those changes in the organisation and qualification of labour are different depending on worker categories, sex, level of qualifications, although also on whether we are dealing with highly industrialised or developing countries.

All of this leads to a radical change in occupational profiles, to a demand

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for new competencies and abilities -until now unknown or undermined- that close the gap between training of workers and training of the citizen, and to a lack of technological determinism. The design and content of occupations have become more complex, jobs require greater knowledge and less physical abilities, the content of the jobs has been enriched and the range of operations performed by all workers has broadened. The work force management system of Fordist industries was characterised by the extreme parcelling out of tasks and the extensive use of unskilled labour. On the other hand, the new paradigm is characterised by the performance of several short series within a variety of different products (flexible automation) and their management has been accompanied by new organizational methods such as *just-in-time*, *kanban*, team or work group production, sub-contracting of tasks or services and even some forms of occupational flexibility (part-time workers, a shorter day for all workers or for specific groups, contracting for tasks, etc.). When dealing with control methods, statistical quality control, continuous upgrading, total quality, zero defect programmes, are incorporated. This involves substantial changes in work environments and conditions which should be designed to generate profound changes in attitude and to change worker practices and the competency requirement into cognitive and tool competencies, access to which is achieved through a higher level of general education. Also, however, the new forms of labour organisation require behavioural competencies and socio-motivational approaches which encourage absorption into teams.

In regard to these transformations at the world level, the inevitable question is how they have been processed in Latin America and the Caribbean and what is happening regarding the adjustment between these new demands and the labour force training realities. Economic transformation and technological modernisation in the continent have been characterised by intense imbalances and heterogeneities. Moreover, at the micro level, contrasting behaviour occurs and it is still possible to detect sectors of activity or firms that -while keeping to a quasi-crafts productive organization- manage circumstantially to find successful market niches which ensure a survival, the continuity of which it is difficult to foresee. In turn, although during the crisis of the eighties the educational capital of the population continued to increase, Latin America and the Caribbean have not yet managed to ensure that an important proportion of their population reaches the levels required by those occupations which allow better income and high productivity levels. And what is even more significant, the quantitative expansion of registration affected the quality of education and increased the difference among the people being educated according to their financial level and culture of origin.



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In this context the management of human capital and, especially, of its skills, should constitute a meeting point, the interlocking space, between desire and reality. When we focus on this aspect, we find the following:

**The conception of training has changed.** Although it was always considered an educational issue, the truth is that for a long time it maintained a more fluid dialogue with the world of production and labour than with the world of school and academics. At present this educational aspect of training is stressed as it becomes the common ground, together with other educational methods and branches, of the challenge of fulfilling the need of people to have access to training and education throughout their lives.

Training, being closely linked to productive work, was always an item within the labour relations systems of our countries. But this presence was for a long time discrete and undervalued by the productive and occupational players themselves. Today it appears as a central component within the strategies for increasing productivity and improving the competitiveness of firms. It is, in turn, associated with wages and with opportunities to participate in the management of production. It is the subject of negotiation and appears with ever greater frequency in collective agreements and labour laws. Employers and workers, as well as their representative organisations, press for decision-making power in the matter of training and, at the same time, find unsuspected opportunities for co-operation and dialogue. The unemployment problem, installed as item number one on the agenda of priorities to be addressed, begins to be attacked through **a new generation of active employment policies, within which training appears as a central, strategic and indispensable component.**

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To talk about training has also been, and always has been, to refer to providing knowledge, abilities and skills linked to a job and, logically, to the handling of a certain technology. It was, no doubt, a transfer of technology towards the individuals who were involved in the learning process. While maintaining this basic element, the truth is that today **the link between training and technology has become much more extensive, profound and complex than in the past.** The pace of innovations accelerates and it is now not only apprentices who must become familiar with a (for them) new technology. Employers, middle and technical executives, managers, professionals, the firms themselves as organisations, must be constantly up to date, require guidance and information, seek spaces for trials and tests in order to make the decision to incorporate or not a certain innovation. Training thus starts to diversify its audiences and it is no longer only the individual worker but also



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other kinds of staff and the firms that request training and updating services regarding technology. As the technology applied to production is rapidly renewed, training also begins to change: the relative importance of pedagogical efforts addressed to handling specific technology -such as a certain type of lathe or certain welding technique- declines and the importance of training to handle and relate to a constantly changing technology increases. This new situation has caused, in Latin America and the Caribbean, that in the most up- to-date and efficient cases of attention paid to firms and workers, the talk and work are no longer in terms solely of training as such, but rather that they are integrated into a set of services, fundamentally technological, that seek to provide an overall answer to the global needs of firms.

**The sectoral composition of the supply of training has changed direction.** The economy of countries, both in terms of product generation and of employment distribution, has changed radically. Three decades ago, the sectors linked to industrial production relatively weighed the most, and everything led to expect that their participation in the economy of countries would increase sustainedly. In keeping with this, the major part of the institutional supply of vocational training basically addressed jobs in the secondary sector of the economy. During the last two decades, in Latin America and the Caribbean, as well as other regions of the world, the industrial sector lost importance relatively in terms of participation in the product, but particularly in regard to employment generation. At the same time, the importance of the services sector has increased, contributing an increasingly greater proportion of the product and taking first place regarding employment generation, absorbing to a large extent much of the labour force which gradually became redundant in the secondary sector. This explains why many of the training bodies of the region have re-directed their supply seeking to give greater weight to tertiary sector jobs, at the same time as a new supply, both public and private, arises and develops, devoted specifically to the requirements of this expanding sector.

## Training: an occupational, technological and educational issue

The relevance of training, within the labour relations systems of Latin America and the Caribbean, is today an indisputable fact. It suffices to consider the background of tripartite sectoral or national pacts or contracts on employment, productivity and labour relations that introduce training proposals; the growing number of collective agreements that explicitly incorporate training and skills development within their clauses; the development of labour laws referring both to the right to training and its implementation, or the appearance of various instances of dialogue and arrangements -bipartite and tripartite- in this field. The links of training with subjects such as productivity, competition, wages, occupational health, working conditions and environment, social security, employment and social equity, makes it increasingly a key element in present labour systems in the region.

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Something similar can be said about the importance of training as a central and strategic component of innovation, development and technology transfer processes. Many vocational training institutions, as well as other fora arising more recently and operating in this field, are not restricted to providing a supply of training alone. Throughout the region it is already frequent to find diverse experiences of technological centres and services which these same bodies establish to offer a broader and more integral range of services, both to firms and to the community at large: laboratories for testing materials, product and process certification services, technology spreading events, specialised publications, data banks for technological resources and consultants in various areas, technical assistance and advisory services, *inter alia*. Likewise, some technological institutes have gone from focusing on the problem of research -development and adaptation of “hard”

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technology, such as materials, tools and equipment; and “soft” technology, such as information and computer programmes- to consider also everything regarding the management, development and training of human resources. This convergence is in no way a question of chance. It is already a part of common sense in the productive sphere that “human capital” is a central and defining component within the productivity and competitive strategies of firms and economic sectors. Training, therefore, appears on this scene as a fundamental tool both to develop this new technology and to take advantage of and use efficiently any other.

14 When we observe the present activities of various training bodies in the region we can see, among other aspects, that a broad and flexible supply of training has developed. One can find, within the curricula of these institutions, from initial training courses, through middle and upper courses, to offers of updating which could even interest university graduates. And, as though this were not enough, there arise countless examples of co-operation with other public bodies, such as Ministries of Education in the fields of middle level technical education, non-university technological education and adult education, with firms and co-operating bodies, with unions, with nongovernmental organisations, and so many other variations which it is impossible to record exhaustively in this document. It can thus be said that training has progressively reinforced an educational component which was always part of it, both through the supply itself of specialised institutions and through a greater interlocking and co-operation with other bodies, agencies and teaching methods at work in this area.

Therefore, labour relations, technology and education are fundamental dimensions of the present reality of training and, furthermore, areas in which the latter plays a decisive role. To analyse these dimensions and fields of action of training in greater depth, each one of them shall be dealt with below: training and labour relations; training and innovation, development and technology transfer processes; training and education throughout life.

## **1. Training and labour relations**

**Training is, today, a central and strategic component of labour relations systems.** This is confirmed by the interest and growing involvement of firms and workers, of organisations representing the former and the latter, of Labour Ministries through their units specialised in the subject, their training and skills development programmes and the new active employment policies, the most recent labour laws and the increase in collective agreements containing arrangements regarding training.

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In fact, training has always been closely linked to labour relations. Even in the pre-industrial stage, when production was crafts-like, there already existed the figures of the master craftsman and the apprentice, where the former gradually allowed and stimulated a progressive accumulation of knowledge and ability on the part of the latter who, finally, became the bearer and continuer of the tradition of the trade. That is to say, even at that time the learning process was completely integrated within those initial labour relations and was a part of the “rules of the game” of production and work of the age.

The development and rise of the industrial era, however, occurred jointly with the trends towards specialisation and greater levels of division of labour in society. Although learning never stopped being something important in work centres, at a certain time the responsibility for training people who were to occupy certain jobs began to be dislodged towards these other arenas, both physical and institutional, which became the training centres.

This latter trend, in Latin America and the Caribbean, occurred parallel to the first industrialising efforts, through the rise of specialised fora which began to take charge of the training function. The apprentice is, typically at this stage, a person, generally a young individual, who attends training courses in an institution for a certain period of his or her life and who becomes a worker when finally hired and located in a job where he applies the knowledge, ability and skills previously acquired. This was, however, a predominant but in no way absolute situation. In fact, already in the mid-seventies, some of the vocational training institutions such as the National Training Institute (INA) of Costa Rica, and Cinterfor/ILO itself, began to worry about delineating and applying strategies that would enable certification of workers who, through their own occupational performance, had reached levels of qualification which deserved formal recognition.

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Thus, referring to the stage of industrialisation which occurred at the onset of the development model, it might be said that, in a general way, training played a role which was to a certain extent disguised within the labour relations systems of the times. Although at any place and under any circumstances qualification was an important component of production, the truth is that during that stage, when reference was made to “labour relations”, it meant basically talk of facts and processes of negotiation and/or disputes around subjects such as wages, stability and job promotion methods, extension of social benefits, etc.

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In that context, training was an activity which rarely was a matter for negotiation; therefore, it was scarcely mentioned within collective bargaining agreements, and in labour legislation was only referred to in some basically declarative ways or specifying the institutional environment in the framework of which its implementation had to be resolved (normally a public and national agency). In several countries labour and employer organizations maintained a significant interest, but in the last analysis it was limited to participation through delegates in the executive arenas of the vocational training institutions.

It was a case, indeed, of labour relations systems inserted in a system in which:

- The State played a central role in several ways, among which were collective negotiations, production and direct provision of services, and protection of domestic production through tariff barriers.

- Firms developed, precisely, in a heavily protectionist context, oriented towards the internal consumption market, and were therefore under no great pressure either from consumers or from the competition.

16      • Workers and their organisations fought for an extension and deepening of their rights, making a basic assumption, which was shared by the State and employers: production and employment would increase continuously, beyond any possible cyclical crises. Unions were, furthermore, organisations undergoing strengthening, to the extent that it was also believed that both industrial production and contracts based on wages would grow indefinitely and so, therefore, would their platform of representation and their power.

- As a result of the same strategy of “inward” development, the imperatives of innovation and technological development were restrained, life cycles of the products tended to be long, and demands for qualification of the labour force, and particularly for its re-qualification, were not so great in terms of updating with new techniques, tools, materials or forms of labour organisation. The challenge was in any case quantitative: to provide a sufficient number of qualified and semi-qualified workers for industry.

In the last twenty years this reality has changed radically in practically every way, causing, among other consequences, a revaluation of training within the labour systems and an increasing interest on the part of the different players in its regard. Why?



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Firstly, because **the international insertion strategies of the economies of the region have changed.** Either by means of unilateral trade liberalisation policies or in the context of regional integration processes, in a more or less drastic fashion domestic production begins to be exposed to other kinds of rules which require urgent action to improve competitiveness. This has led to an intensification of the pace of technological change applied to production, a reduction in the life cycles of products and, therefore, also of skills, generating constant pressure for their updating.

Secondly, **the relative importance of the “knowledge factor” within the new forms of organisation of production and labour has increased markedly.** Information and knowledge control thus becomes strategic, as were of yore land control or control of the means of production. The capacity to generate knowledge, and to manage it within the concept of learning organisations, is considered a key strength for competitiveness and has resulted in a revaluation of human talent. Thus the interest of the different players in accessing decision-making regarding design, execution or financing of training also becomes something vital.

Thirdly, **the assumption of sustained and indefinite growth of production and employment -or rather of the direct relationship between them- has been shown at the outcome to be invalid.**

Although production may continue to grow, as in fact it does, employment generation does not occur in correlation with it and, in many cases, we face the new and worrying phenomenon of economic and productive growth with rising unemployment. Employment growth in the most economically dynamic sectors is not enough to compensate, in many cases, the dismissals arising from the new capital-labour relationship, affected by the introduction of technological innovations and by the closings occurring in sectors incapable of counteracting the competition of goods from abroad. In the old context, it was enough to apply compensatory-type policies in periods of crisis, such as unemployment insurance or emergency employment programmes. At present a new generation of active labour market policies has arisen which invariably considers training and skills development to be their most central and strategic element.

In this new context, the position of the productive and occupational players changes, negotiations become more complex and it becomes increasingly difficult to deal with subjects such as wages or labour stability in an independent manner. Much more attention is paid to the relationships among employment, wages, productivity, production, competition, quality,

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etc. It is within this new state of affairs that training appears revalued and begins to be perceived as a strategic subject. It is incorporated into a growing number of collective agreements and also included in labour laws. Experiences of social dialogue and arrangement arise and multiply in the training field, and they prove to have a very large capacity for development and sustainability, even in contexts where conflicts are great.

### ***1.1. Training in national agreements***

Training has been incorporated as an important chapter in the different national agreements -generally tripartite although also in some cases bipartite- which have been subscribed in Latin America and the Caribbean during the nineties.

18 In **Argentina** the following are some examples: the “Acuerdo Marco para el Empleo, la Productividad y la Equidad Social” (Framework Agreement for Employment, Productivity and Social Equity), signed on 25 June 1994 between the social partners and the Government; and the “Acta de Coincidencias” (Record of Coincidences), agreed to on 9 May 1997 between the CGT and the Government. The clause of the latter headed “Participation in vocational training” establishes that “life-long and continuous vocational training shall be fostered, as well as that of the unemployed. In both cases with the active participation of the social partners to increase the efficiency and direction of expenditure and of policies.”

In **Chile**, the Framework Agreement of 1990 and the Tripartite National Agreement of 1991 are the two most important precedents on the subject. In the latter, it was agreed to develop, in an agenda of mutual interest, initiatives on skills development and vocational training policies, creating consultative bodies for the Programme for Training and Development of Technical Education, which is managed by the Ministry of Labour and Social Security, and of the National Training and Employment Service (SENCE). More recently, in 1998, the new Training and Employment Statute was enacted which, after a in-depth process of consultation and debate at the political and social levels, introduces important changes in several areas, among which those dealing with the creation of new methods of training management at the firm level, encouraging the participation of workers in the Bipartite Training Committees. Another tripartite body was also created: the National Training Committee.

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In **Colombia**, in the “Acuerdo de Productividad, Precios y Salarios” (Agreement on Productivity, Prices and Wages), of 19 December 1994, a tripartite instrument, the establishment of agreements and definitions regarding productivity are dealt with in its Chapter VII. After stating that among the various factors negatively affecting productivity stress is laid on the lack of skills in the labour force, technological backwardness and the deficiencies of science and technology policies, training and qualification of the labour force are defined as a fundamental instrument in which workers and employers must work jointly with the Government in order to achieve the objectives proposed. The parties commit themselves in this regard, making a statement of programme according to which the three parties will develop joint programmes to promote the increase of productivity, among other factors, through training.

In **Mexico**, a country with a long tradition in this type of agreements, the “Acuerdo Nacional de Productividad” (National Productivity Agreement) was signed on 16 July 1990, and includes statements referring to making an educational effort through actions implemented through national programmes aiming at educational modernisation and at training and productivity. In 1992 the “Acuerdo Nacional para la Elevación de la Productividad y la Calidad” (National Agreement for Improving Productivity and Quality) (ANECAP) was entered into, and deems it indispensable to promote, within firms and with the co-operation of the workers and their organisations, life-long training policies at every level, programmes for re-training the labour force, programmes for induction into jobs, new training methods in the rural sector and in medium and small-size firms and the official establishment of new types of registration and reporting of training programmes, in order to promote their greater decentralisation and publicity. The Agreement entitled “Alianza para la recuperación económica” (Alliance for economic recovery), reached in 1995, in its Chapter VII establishes concrete actions regarding training: broadening of the programmes of “Scholarships for unemployed workers” and of “Integral Quality and Modernisation”, as well as instructions for the “Consejo de Normalización y Certificación de Competencia Laboral” (Labour Competency Certification and Standardisation Council). Finally, the agreement entitled “Diálogo Obrero-Empresarial hacia una Nueva Cultura Laboral” (Worker-Employer Dialogue towards a New Occupational Culture), dated 13 August 1996, a tripartite instrument, also contains important and explicit references to training.

Another example is **Panama**, with the “Pacto de Compromisos para el Desarrollo” (Pact of Commitments for Development), adopted on 6 December

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1994 within the framework of Agreements on Concerted Action (Bambito III). In it the enterprise and union players agreed to take on greater responsibility, among other subjects, regarding training, which later resulted in the establishment of the bipartite Labour Foundation which has impelled important initiatives in this matter.

### ***1.2. Training in collective agreements of branches of activity or industry***

A recent study on vocational training in collective negotiations, undertaken by Cinterfor/ILO, establishes as its first conclusion *the legal basis of the entry of collective negotiations into vocational training*. It further states that *the circumstances by which training is a subjective right of the worker and an obligation of the employer, and by which it enters into a direct relationship with the other labour rights and occupational conditions, favour the possibility -and the suitability- that it be regulated by collective autonomy*. As a non-exhaustive review of the survey carried out by the same study, it is possible to mention a series of concrete examples in the region.

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In **Argentina**, the collective agreement of the gas sector, for example, refers to training as being linked to upgrading the abilities of workers and to maintaining the quality of service. Regarding resources mobilised to promote training, it is standard that firms are in charge of financing the activities, and a significant aspect is that fulfillment clauses are established regarding employers' contributions to Union Funds for Training, or to support Vocational Training Centres, in all the cases analysed. The Insurance Sector Framework Agreement No. 191/92, between professional employers' organisations and the workers' organisation (Insurance Union) includes a clause, entitled Occupational Training Committee, on a really innovative mechanism of participation which aims to achieve the active participation of the parties in the definition of training policies in the sectoral area, targeting the qualification and re-qualification of staff.

In **Brazil**, the Banking Collective Agreement, although it does not stipulate concrete training mechanisms, among its economic regulations provides for the payment to employees of remuneration for educational purposes, called "education-wages", to compensate their first level education expenses, and those of their children, in schools that charge fees, it being further understood that this item is not in the nature of wages. Moreover, granting of special leave for study is also regulated, on the basis that the days involved are actual working days. In the last few years, among the relevant experiences in

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this country it is impossible not to point out the Automotive Sectoral Agreement, which includes the collective negotiations in Brasilia (February 1993) between private firms and professional employers' bodies on the one hand, and the workers' organisations represented by the CUT, by Fuerza Sindical and by the Sao Paulo Federation of Metallurgical Workers on the other. A particular aspect of this agreement is that it also includes the Federal Government as a third party, interested in promoting productive investment and employment, through facilities and guarantees acknowledgedly of the private sector. In the list of subjects on which there was agreement and that include increases in production levels, job offers, wage levels and sales, as well as reductions in taxes, profit margins of the production line and consumer prices, some regulations are incorporated regarding technology, quality and productivity. This is done on the basis of broadening the automotive sector area in the "Brazilian Quality and Productivity Programme", especially in that which concerns training and recycling of employed labour. Through the creation of a sectoral technical-scientific body, or the transformation of one of the existing bodies, technical standardisation, quality certification and the implementation of quality, productivity and technology programmes are sought at the national level, including worker representation on the Programme Deliberating Board. This body has been assigned the task of procuring and bringing together the resources and qualifications of the existing technology and quality agencies. Among the working groups created to implement the agreement and promote a continuous agenda there is one that includes aspects related to technology and quality.

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In **Mexico**, the collective agreement entered into in 1996 by Ford Motor Company S.A. (Hermosillo Stamping and Assembly Plant) and the National Workers' Union of the firm, includes special provisions on training. The parties agree to encourage the vocational development of the workers through training and skills upgrading programmes, providing adequate means, within and/or outside working hours. For this purpose, staff rotation is promoted in the different operations in the work areas, on or off the line. A Mixed Training and Skills Upgrading Committee is created which must establish training and skills upgrading programmes to foster, especially, ability and respect for industrial safety rules, and adequate plant and equipment must be provided for training activities.

In **Paraguay**, the collective agreement of the National Electricity Administration (ANDE), dated 1993, is one of the first and most complete collective agreements entered into concerning a State agency in this country. The chapter on "Training and Development" establishes some central

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principles regarding the institute, particularly the statement that training is, at the same time, a *worker's right and an employer's obligation*. In this respect, one of its clauses states literally that "the parties agree on the importance of training the staff of the institution, whereby the continuity of staff training is established as a workers' right and the firm's obligation, said training being updated technologically and administratively in all its forms." Provision is also made for the creation of skills upgrading centres, research laboratories, courses and scholarships aimed at the life-long training of the workers and development of their skills. The agreement also establishes the participation of Sitrande (ANDE Workers' Union) in training management, and agreement on providing time for training, through recognition of leave for the vocational training of workers.

22 In **Peru**, a record of understanding was signed in 1995 between the copper company Magma Tintaya S.A., operating in the Departamento of Cuzco, and the workers' union. Through its collective negotiations, a Joint Union-Management Committee was created as a project of shared participation in management. Among its relevant objectives are included employment stability and improvement of the quality of life in the job, within a framework of relations which permit productive operations and competitive costs. With that purpose, the adoption of common actions was sought, involving from the relocation of affected staff and the opportunity for training for new jobs, to a possible placement service when no other possibility is to be found.

In **Uruguay**, according to the collective agreement of the sector, dated 27 June 1997, between the employer and labour parties, the **Fundación para la Capacitación de los Trabajadores de la Industria de la Construcción** (Construction Industry Workers' Training Foundation) was created, with management and workers meeting on equal terms, with the following aims: a) to finance actions and instruments enabling vocational training of workers and employers of the Construction Sector, and b) to issue, itself or whoever it may appoint, a "certificate of aptitude" certifying that the worker has taken and passed the training course. Its financing stems from contributions on equal terms of employers and workers: 0.5 per thousand are charged to the employers on the liquid wages of the sector and 0.5 per thousand are charged to the workers on their liquid wages, and also from donations, co-operation projects and cost recoveries for services rendered. Another example which may be mentioned in the same country is the pulp and paper sector where an important firm, **FANAPEL, the National Paper Factory**, entered into an agreement, between the firm and the union, to develop a human resource development and training programme based on the occupational competency approach.

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### ***1.3. New types of State action in the field of vocational training: the role of Labour Ministries***

As a feature within a more general process of restructuring and reassessment of the role of the State in social and economic life, but also regarding the revaluation of training in the field of labour relations, the Labour Ministries (Mintrab) have, in an increasingly generalised manner, become protagonists in the area of vocational training in Latin America and the Caribbean, mainly concerning the definition of the general thrust of policies.

From the former mediation role in the capital-labour relationship, focusing on remuneration, stability and working conditions aspects, these Ministries broaden their competence to deal with, in this regard, training from the standpoint of active employment policies. This is expressed both in regulations and in the institutional structure itself, with the creation and development of secretariats, boards or services specifically addressing vocational training and its relationship with other occupational aspects.

This increasing incumbency began, precisely, when the labour authorities understood that **vocational training is a key feature in the formulation and implementation of active employment policies.**

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In the mid-seventies in Chile; approximately ten years later in Mexico, and particularly since the beginning of the present decade in other countries: Argentina, Brazil and Uruguay, to mention a few, the Labour Ministries developed ambitious projects increasing their involvement in the field of public employment policy generation. These programmes, financed with their own resources in almost all cases, reinforced in others by international banking credits, not only acknowledge the relevance of vocational training to achieve results, but also initiate a re-formulation of their traditional institutionality: the training systems which begin to be generated seek definition on the basis of greater attention being paid to the production machinery's **demand for training.** This approach is conceived with a view to overcoming, somehow, the rigidity observed in some national institutions which had become attached to an organizational and programmatic structure which was too closely linked to the available training supply.

Because of this, it can be said that training occupies a central place within the active employment policies which are beginning to be promoted by the labour ministries. Within this approach, the conception developed

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plays a role centred on policy and strategy design, generation of financing mechanisms and supervision, monitoring and evaluation of training activities, delegating the function of executing those activities to other agents, both public and private.

As has already been said, the importance assigned to these policies is evident in the major financial resources allocated to carrying out the various programmes and projects. These resources come from different sources: public funds for training established by law; special resources from the public treasury; unemployment funds; as well as the Labour Ministries' capacity to obtain public loans in the field of vocational training (projects together with the IDB and the World Bank, *inter alia*). As a partial review, the following examples may be mentioned, among others:

- In **Brazil**, The National Training and Vocational Development Secretariat (SEFOR) has a Workers' Protection Fund (FAT) administered by a Deliberating Council (CODEFAT) which is tripartite and in which management and workers are involved on equal terms.

- **Chile**, has the National Training and Employment Service (SENCE), in charge of managing the various programmes such as those involving the use of tax concessions, youth employment and training (Chile Joven), among others.

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- **Mexico**, executes projects addressed to develop demand for training through ingenious mechanisms to strengthen and consolidate micro-, small- and medium-sized firms, as well as significant resources disbursed through scholarship programmes for the unemployed and an important national effort addressed to establishing a system of standardisation and certification of occupational competency.

- **Uruguay**, takes measures through the National Employment Bureau (DINAE), of the Ministry of Labour and Social Security, and the tripartite National Employment Board (JUNAE), in charge of allotting resources from the Labour Reconversion Fund.

Also important are tripartite actions which, co-ordinated by the Ministries, incorporate employers and workers to discussion and decision-making on policies being considered.

But what merits special mention is the present role of Labour Ministries through the already cited **active labour market policies**. To the extent that



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those Ministries participate in the definition of the larger national guidelines involving development and productive transformation strategies, as they begin to act also in the field of strengthening and modernising the supply of training, they are able to act simultaneously and consistently on the different and major aspects of the problem.

The decision to intervene in the labour market through employment policies arises from different reasons: to address transition problems in the process of opening up the economy; to respond to social risk situations through redistribution mechanisms; to correct market defects, both in terms of the link between labour supply and demand and in the training area.

Within the new concept of active labour market policies, a field in which the Labour Ministries have taken, and take, measures of great importance and significance, is that of youth training and employment programmes and projects. Addressed to young people in a situation of structural unemployment and high social risk, they arose as mechanisms for compensating the harsh social effects of the policies of structural adjustment and opening up to international trade of the economies of the region, with their relevant processes of reorganisation of state social services. Through a concentrated and intensive process of services involving skills development, training by psychosocial-type cross-sectional competencies, remedial education and on-the-job training, the programmes aim at increasing opportunities for labour insertion of this population. Some of the main characteristics are: the adoption as an indicator of the relevance of training to the detection of opportunities for on-the-job training in firms; the self-focusing of the target population; and non-concentrated execution regulated by market mechanisms.

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The Labour Ministries of the region, in short, are acting decisively in the field of vocational training and contributing to its integration on the basis of higher and national strategies, related to productive transformation and the challenge to increase productivity and competitiveness of firms and economies, in order to ensure environmentally and socially sustainable economic growth.

## **2. Training and innovation, development and transfer of technology processes**

**The most innovative experiences at the regional level on the subject of training conceive the latter as part of a set of technology transfer**

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**actions, both of labour and of production, adaptation and innovation.** This marks a turning point, both conceptual and methodological, in the action of institutions, training centres and technological education units.

In conceptual terms, these experiences are characterised by specialising to a certain extent towards specific economic sectors (metal mechanical, pulp and paper, leather and footwear, chemistry, construction, etc.), which allows them, among other benefits, a greater degree of technological updating of machinery, equipment and materials, although also regarding knowledge and techniques applied to production. This updating, supplemented by new strategies of approach to and co-operation with the productive sector, is making it possible to offer a series of services which complement the traditional supply of training.

26 Either as a conceptualisation prior to these changes, or as a practical result thereof, what is certain is that there is also a change in the notion of who the subjects are to which these units, services and centres cater. If previously the main population catered to consisted basically of individual workers, fundamentally young people, to whom it was sought to transmit systematically a body of knowledge, abilities and skills linked to an occupation, today these new experiences also conceive productive units (firms of various sizes and characteristics), their productive links and organisations, and the economic sectors themselves, as part of their primary audience.

Moreover, there is an effort to cater to this new audience in a more integral manner than in the past. Such are the cases of the National Technology Centres, of the SENAI, and the Federal Technological Education Centres, dependent on the Mid-level and Technological Education Secretariat, of Brazil; the Technological Services Centres of SENA; the Technological Nuclei of INA; as well as the activities offered to firms in Peru by SENCICO and SENATI, so that they may access not only training and skills development services, but also research and development, technical assistance and consulting, or technological information services.

Although this diversification of institutional services includes as a component a search for alternative financing, in many cases this is only an emerging component. Its greater potential lies in the processes of strengthening the updatedness, relevance and quality of the training itself. The dovetailing in an appropriate environment of training and education, labour and technology, enables mechanisms to be structured by means of which there is an acquirement of, besides solid technical and technological knowledge, the

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values, habits and behaviour inherent to the competencies which present historical circumstances require of workers, technicians and professionals.

A fundamental characteristic of this new conception of training, lies in the incorporation of content and methodologies belonging to what has been called “technological education.” Briefly, this involves *recording, systematising, understanding and using the technology concept, historically and socially constructed, to make of it an element of teaching, research and extension, in a dimension that exceeds the boundaries of simple technical applications: as an instrument of innovation and transformation of economic activities, to the benefit of man as worker and of the country.*

Technology itself has exceeded today the purely technical dimensions of experimental development or laboratory research; it encompasses issues of production engineering, quality, management, marketing, technical assistance, purchases, sales, *inter alia*, which transform it into a fundamental vector of expression of the culture of societies. It could be said that the technological process itself is, in and of itself, an exercise in learning which modifies the way the world is “seen”, marked by theories, methods and applications. It is also knowledge and maintains, therefore, the constant demands of the “spirit of investigation” regarding the facts generated, transmitted and applied. There then arises a need for closing the distance between the conquests of scientific and technical knowledge and the knowledge of those who apply the technologies, be they students, instructors, researchists or workers, in order to inform them of their role in the technical transformation of production and labour.

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In the more integral conceptions in this regard that have been implemented in the region, there has been a move away from the notions restricted to skills upgrading, training and preparation of the labour force as a function of the immediate needs of the labour market. On the contrary, they seek to transmit to the worker different dimensions capable of making him or her able to cope with the scientific-technological evolution of the modern world and, in this manner, allow them to contribute their intelligence, creativity and effort inside the productive unit.

A rough survey of what is happening in the region allows us to see, on the one hand, that a goodly part of the training institutions, both public and private, are dealing with the challenge of establishing a closer link between the supply of training and the processes of innovation, development and transfer of technology. However, on the other hand, there is also a tendency

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for technological institutes and agencies related to sectoral employer bodies to begin to deal simultaneously with the subjects of technology and training and the development of human resources. By way of illustration we present below some of the multiple and rich experiences at present under way in the region which are proof of the approaches we have mentioned.

28      The **SENAI**, in Brazil, is diversifying significantly its institutional mission, broadening the boundaries of its role as a vocational education institution and getting to be acknowledged, also, as an instrument for the generation and dissemination of technology. Technological incubators, islands of technology of production integration and digital information transportation systems are, *inter alia*, some of the institutional initiatives designed to consolidate this function. The incubator projects are considered means to accelerate modernisation, not only by creating new firms, technological or not, but also to rapidly surmount present structures that find it difficult to introduce concepts imposed by present paradigms of the society of knowledge. The basic proposal is to facilitate the long and expensive voyage between the laboratory prototype and the head of the industrial run. Thus the importance of a strengthened infrastructure and of the activities associated with the support provided by orchestration, marketing, trading and disclosure. An incubator makes available to emerging firms physical space, support services - telephone, fax, graphic reproduction, secretarial services, administration, accounting support, computer support - human resources, specialised services, training, technological support, etc. The mechanisms of orchestration, training and technological support developed by the SENAI serve to provide a basis and training for employers so that they may be able to face with greater security the obstacles which arise between the world of research and entrepreneurial reality, where competition -quality, productivity and price- is the factor that determines success.

But perhaps one of the main strategies of the SENAI is the model of the National Technology Centres. Conceived on the basis of the certainty that an increase in productivity and competitiveness on the part of industrial firms is conditioned by investments in technology, these Centres become poles for the generation, absorption, adaptation and transfer of technology, and they work on adding value to the information.

The evaluation system to obtain the National Technology Centre (Cenatec) Award was conceived on the basis of the National Quality Award (PNQ), the structure of which, in turn, is based on the "Malcolm Baldrige National Quality Award." The Cenatec evaluation systems includes three different versions:

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### **Brazil: CIET/SENAI, a watch-tower of technological change and its impact on vocational training and labour**

The International Centre for Education, Labour and Transfer of Technology (CIET) is a joint initiative of CNI/SENAI and UNESCO. Its role is to act, at the national and international levels, as a watch-tower of the effects and changes produced by new technologies regarding vocational training systems, absorption and dissemination of technologies and qualified workers in the productive sector.

In this Centre, research is carried out to analyse the consequences of technological change and new information technologies regarding labour, education and technological development systems. As a watch-tower of transformations under way, the Centre gathers and develops information, seeking to find solutions compatible with the realities of Brazil and, particularly, with the SENAI vocational training system.

The Centre's activities are organised under groups, each of them performing tasks within a specific area of CIET interest. The Information Group is responsible for studying the impact of new information technologies and communications processes on society, and especially on productive processes. In this regard, the following activities may be used as an example: technical staff training in access to national and international data bases and Internet, installation of electronic networks and gathering information in data bases.

The Education Group gathers and produces information on education, both in Brazil and abroad, contributing to clarify the complex relations between vocational training and productive activity. Thereby, it helps to improve understanding of the Brazilian educational system and to find alternative ways to upgrade it.

Regarding labour, a follow-up is done of the transformations that affect requirements in the training area in the organised segments of the economy, particularly in industry, as well as the unemployment structure and studies on the so-called informal sector. Monitoring of these changes provides information which may be used in the formulation of official policies and in vocational training strategies.

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i) A version used to grant the Award in the Bronze Category, which is the simplified version of the PNQ, the result of the reduction in the scope of the items included in each of the seven evaluation categories: leadership, information and analysis, strategic planning, development and management of human resources, process management, business results, focus on the client and the latter's satisfaction.

ii) The evaluation system of the version used to award the Silver Category is more complex and more extensive since, besides increasing the level of requirements regarding Quality Management, it also introduces Cenatec's items of evaluation referring to Technological Content and its results, with a minimum standard of points which must be achieved, as well as the "Support Services" and "Facilitator Effort" items.

iii) Finally, for the third version, the award in the Gold Category, the PNQ Excellence Criteria are used, in their present version, supplemented by the item referring to Technological Content.

An attempt was therefore made to institute a system for the evaluation of increasing complexity and demands, with the aim of introducing in the SENAI units constant effort to improve quality standards, without establishing, despite this, schedules or obligatory participation in the three categories.

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The National Technology Centres (Cenatec), reciprocally with the productive sector, with the universities and with research institutions, exercise simultaneously the functions of education, technical and technological assistance and applied research. The SENAI includes today 32 Centres which have already been certified, located in 11 states of the Federation, in the southern, south-eastern and north-eastern regions of the country, which perform in 23 technological areas.

The Centres train mid-level industrial technicians at the same time as they provide practical technological extension courses, consulting services to firms, dissemination of technological information, quality certification and certification of experimental development of products and processes, addressed to a sector of industrial activity in their area of competence. However, there are already pioneer activities where, through some Centres, the SENAI makes inroads in higher education, as is the case of its course in Textile Industrial Engineering.

The basic philosophy of action of the Cenatec's contemplates a cross-section of disciplines, speed in the circulation of technological information

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-with a strong presence of easy accessible information systems- and flexibility in the use of pedagogical instruments, programme contents and curricula, thought out in terms of the constant interaction between technological practices of firms and training activities.

On the basis of experience accumulated through the Cenatec's quality evaluation and accreditation system, the SENAI is also promoting a strategy of expansion to all its operational units of the adoption of management excellence models. In 1997, the certificate of "Vocational Education Model Centre" (CEMEP) was created, conferred in the three categories referring to SENAI units which stand out due to the quality of their services. The expectation is that this system may become an efficient instrument for improving quality standards and operational performance in the majority of the units of the institution. Their main aim is to develop programmes with innovative teaching-learning methodologies and flexible curriculum organisation suitable for the demands of life-long education, stressing the integral training of the individual. But the CEMEP process, besides being an innovation in vocational education, also seeks to improve the quality of the technical and technological assistance provided by the unit to its clients. Together with the International Centre for Education, Labour and Transfer of Technology (SENAI/CIET) and the National Technology Centres, the CEMEP's constitute the National Technology Network of the SENAI.

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The **INACAP**, in Chile, has a series of technological centres where training services are provided to workers, technicians and professionals, as well as technological services of different kinds to firms and other bodies related to production, both of goods and of services. Among the INACAP technological centres, the International Telecommunications Training Centre (CINCATEL) stands out. Training courses designed and executed by this Centre are included in a wide variety of specialisations which are being implemented in the telecommunications field, based on market demand and on the feasibility of having the human, material and technological resources necessary to offer a training service which fulfills the demands of its clients. CINCATEL has laboratories for Digital Conmutation, PCM Transmission, Fiber Optic Transmission, Digital Microwaves, External Fiber Optics Plant, Computer Science and Internet, and Communications. It possesses both the infrastructure and the human resources needed to provide advisory and engineering services both to the private and the government sectors.

As examples of trade associations and technological institutes that carry out activities which converge with those performed by training institutions, we can mention, *inter alia*:

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The **Chilean Chamber of Construction (CCC)**, a body which, together with its normal functions as an employers' association, has a Technological Development Corporation which provides services of: *technological dissemination*, through publications, encounters and seminars, and establishing relations with research and technological development centres in other countries; *transfer of technology*, through technological opportunity detection, co-ordination of business based on technology, advisory services for obtaining funds for technological innovation via contests, and technology transfer cycles; *coordination of technological interest groups*, for drafting technical and informative documents, regulatory documents, stimulating related research and managing technology transfer projects; *promotion of technological studies*, technical studies, sectoral analyses and feasibility studies. This action on the part of the CCC in the technological field is supplemented by the development of an initiative aimed at establishing competency profiles as required in the Chilean construction industry, as a way of guiding both firms in their screening, training and promotion of human resources policies, and the education sector and training system in the curricula they offer.

The **SENA**, of Colombia, has had, in its more than forty years of age, an increasing relationship with productive technological development. From the standpoint of this institution, its main function, to provide complete vocational training for the country's workers, can be defined as a transfer of technology in a training environment, to be applied to the productive processes of firms of all sizes and technological complexities.

Among the specific fields of endeavour of the SENA the focus of which is explicitly the support of technological development, the following services can be singled out: support to sectoral agreements regarding competitiveness; applied research in association with other bodies; and special co-operation agreements. These activities are carried out mainly by 21 training and technological services centres which have comparative advantages to further technological development activities, in which a significant part of the resources of the body's regular budget is invested. These centres possess an infrastructure in equipment and plant which can be used in strategic alliances with firms and technological development and productivity centres to promote activities in the framework of innovation and technological development.

At present that responsibility has been increased by the assignment of a significant part of its parafiscal income to productive technological development projects, in accordance with the provisions of Law 344 of 1996. By applying these resources the following is sought:



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- To increase the competitiveness of productive sectors with the aim of promoting exports, improving innovative capacities and raising the level of learning of employers and workers, as support for the basic strategies of employment generation and upgrading the quality of life of the Colombian population.

### **Colombia: technological development and training**

In order to provide support to the Colombian corporate sector in its endeavours to modernise its technology and achieve adequate efficiency, quality and productivity levels, the National Training Service (SENA) has restructured the activity of its specialised centres to turn them into infrastructures for technical support of national production -Vocational Training and Technological Services Centres- by providing technological services and undertaking research activities.

One of these Centres is the Colombian-Italian “Américo Vespucci” Industrial Automation Centre. Created in 1988 through a co-operation agreement with the Italian Government, at the beginning its aim was to develop vocational training programmes in the area of industrial automation processes. Later it extended its activities to include providing technological services and applied technological research.

At present it concentrates on the following:

- Production lines and sectors covered by sectoral competitiveness agreements
- Production lines that are highly dynamic technologically and in terms of their impact on employment
- Production lines with an impact on the quality of life
- New technology areas with a cross-sectional impact on competitiveness and productivity of productive sectors

The technological endowment of the Centre includes the experience and knowledge of its human resources and its technological lines in CAD/CAE design, CNC/CAM manufacture and robotics with technologies for ensuring quality levels and metrological accuracy.

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- To provide vocational training in the country, to respond to the needs of the productive sector, in such manner that it be flexible, of good quality and relevant.

- To modernise SENA vocational training centre management systems.

- To initiate the dovetailing of the National Vocational Training System with the National Innovation System, establishing common approaches and strategies which enable the quality of technical and vocational education to be raised, technological innovation in productive sectors to be furthered and the creation of a new institutional culture for long term competitiveness in Colombia.

34 In a general way, Colombia has sought to structure its efforts regarding science and technology in a process beginning with the enactment of Law 29, of 1990, which provides for the development of scientific research and technological development and grants special powers, *inter alia*, to modify the statutes of official bodies with science and technology functions, including those of changing their appointments and linkages and creating the bodies needed. The Law was broadened and specified in 1996 by three decrees: one establishing rules governing association for scientific and technological activities, research projects and technology creation; another creating the National Science and Technology Council and reorganising the Colombian Institute for Science and Technology Development (COLCIENCIAS); finally, a decree which regulates the specific modalities of contracts for promoting scientific and technological activities.

This legal framework has provided an important base for reinforcing activities related to technological research and development by decentralised agencies such as the SENA, as well as universities and other institutes involved in the subject. In this context, the role assigned to vocational training, and concretely to the SENA, in competitiveness policy is very important, not only as a provider of training services, but also of funds for technological development projects. Together, SENA and COLCIENCIAS constitute the National Technological Development Projects Committee, the purposes of which are, *inter alia*: to propose specific actions for dovetailing the National Innovation System with the Vocational Training System, according to the general policy and guidelines established by the CONPES and the National Science and Technology Council; and to analyse the projects and the concepts of the evaluators and experts and decide on the feasibility of the initiatives that meet the requirements of relevance, quality, employer commitment and technological innovation.

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One of the concrete expressions of the results of this strategy are the Technological Development Centres, in some cases managed directly by the SENA and in others by the private sector with the support of this institution. The SENA at present has Centres in different regions and cities of Colombia, to wit: ASTIN Centre for Technical Assistance to Industry; Colombian-German Centre, targeting welding processes and quality control; Metallurgy Centre, working in the field of iron patternmaking and moulding, ferrous and non-ferrous metal melting; Colombian-Italian Centre, in design and manufacturing systems with the aid of computers, applied to metal mechanical processes and products; Industrial Management Centre, in the fields of materials testing for metal mechanical quality control, thermal treatments and metallographic analysis, as well as programming, planning and control of industrial and maintenance processes, and industrial chemistry; Wood and Furniture Colombian-Canadian Centre; Textile Centre; Clothing Centre; Footwear Technological Centre; Hotel, Tourism and Food Centre; Graphic and Related Products Centre (SENIGRAF); Commercial Management and Marketing Centre; Latin American Minor Species Centre, in livestock activities. In order to illustrate these experiences in greater detail, we describe below two examples of SENA Technological Centres and two of private Technological Centres:

- The “Americo Vespucci” SENA Colombian-Italian Centre of Industrial Automation, in Bogotá. The sectors of influence of this Centre, due to its experience, knowledge and handling of the country’s industrial policies, are: Automotive Capital Goods in the field of spare parts for that industry, electrical appliances and the furniture and equipment goods industry. The basic technological areas are: design, manufacturing and production, to carry out research, and of metrology and quality as a support for the technological services infrastructure.

- Centre for Technical Assistance to Industry, ASTIN, in Cali, which was the result of an agreement between the SENA and GTZ, of Germany. With an organisational set-up similar to that above, it has different operational areas: electronics and automation; matrix making; plastics; and technological services.

- The Plastics and Rubber Training and Research Institute (ICIPC) includes, within a wide range of members, trade associations, firms, management schools, which have allowed it gradually to broaden its base for inclusion into and establishing a relationship with various productive and scientific-technological sectors. The services offered by the ICIPC are

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summarised as follows: open and closed training; advisory and consulting services; laboratory services; advanced training; professional encounters; research and publications.

- The Graphics Industry Technical Training Institute (IFTAG) functions as an operational area of the employer association of this sector (ANDIGRAF), but it is inscribed within a complementation strategy with the SENA regarding financing, infrastructure and human resources. It offers courses on demand and a specialisation in management, as well as consulting services that include visits to plants with a methodology known as “technical plant auditing.”

The **INA**, of Costa Rica, has taken on the duties of advising and supporting producers of different sectors, which tasks have been organised in the mould of Training and Technical Services Nuclei. The approach of these nuclei is sectoral and their aim is to strengthen the sectors producing goods and services, providing the firms with options regarding training, transfer of technology, technical assistance, technological information, project and prototype development, *inter alia*, in order to contribute to increasing their quality, productivity and competitiveness levels. These are units that are not technically concentrated; they bring about the convergence of different players and resources, facilitating dialogue and co-operation, at the same time as they make possible a deeper and more systematic awareness of the reality which is to be affected.

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**SENCICO**, in Peru, besides rendering training services in the construction area, takes on other tasks:

- in *research*, seeking new construction technologies and to upgrade native technologies, and undertaking studies related to building, urban development and improvement of the habitat in general;

- in *standardisation*, working out and updating, through Specialised Technical Committees, standards for design and construction, which are incorporated into the National Building Regulations. The Committees are made up of representatives of various research institutions, universities and other institutions related to housing and construction.

- The aim of the *Materials Testing Laboratory* is to provide academic support to some careers linked to the construction sector, and it also renders services to users in the execution of materials quality control tests and soil studies for civil construction.

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- Research is also carried out in the field of construction materials and soil technology.

**SENATI**, also in Peru, has adopted a strategy of diversification of its services towards the technological area which is methodologically different from that of other institutions. Although it does not possess technological centres *per se*, it provides advisory and technological information services, the former through forming *ad hoc* advisory teams upon the demands submitted by firms or groups of firms, and which are made up by the instructors of the institution as well as by external consultants, of which it has an updated and screened register. Technological information has been provided by holding events, one of the most important of which is the recently created “International Industrial Technology Congress,” where employers, professionals, technicians, workers, students and instructors are introduced to the main technological innovations which have arisen for the different productive sectors.

**INCE**, in Venezuela, has implemented recently an institutional innovation to establish Vocational Training and Technological Services Centres. The Centres are seen as “variability reducers” of productive sector technological demand, establishing the Institute’s position for its internal and external audiences, for which purpose it takes account of the demands of the regional universe of firms, as well as the intensive utilisation of installed capacity. In terms of research and development, the INCE has planned the following activities for its Centres: applied research; experimental development; adaptation-adjustment; design; simulation; unbundling of packaged technology; and technological studies or diagnoses. In the line of rendering technological services, it offers: technical assistance; consulting services; information, documentation and dissemination services; laboratory tests and essays; design and standardisation of methods of analysis and sampling; specification, selection, testing and start-up of equipment; and mediation.

The **firms of the SIVENSA group**, also in Venezuela, constituted in mid-1976 the **FUNDAMENTAL Foundation**. Basically aimed at training, skills upgrading, development and advisory services to firms regarding human resources, this Foundation has been increasing its sphere of action to the entire country in what is called the “soft” technologies applied to organization, administration and management of productive labour. Among other services the Foundation provides advice to firms that seek to be certified under the ISO 9000 Standards, a sphere of action dealt with also by some of the training institutions that have obtained, in turn, their international certification.

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### 3. Training and education throughout life

**Training is, in the final instance, an eminently educational activity, and both its history and its present status in the Latin American and Caribbean region confirm it.** In initial periods, almost all the vocational training institutions of the region made significant efforts to assign priority, on the one hand, to young people not incorporated in the regular educational system, by providing them with training. Moreover, the first institutions which arose in the region had as their main and explicit purpose to structure and manage the training which had so far been a casuistic endeavour, barely regulated, of some expanding industrial sectors. Training was clearly conceived for young people of between 14 and 18 years of age who finished primary education and had no possibility or aspirations to continue in the formal educational system. It was therefore an alternative option to mid-level education, and was initially conceived for the children of workers who aspired to follow in the steps of their parents.

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Originally, the training thus offered was neither recognised in any way nor did it have equivalencies in formal education levels. It was conceived as a completely independent system of training for employment, with no pretensions to a parallel level in the regular system. However, the development of the situation and coverage of the regular education system did have important effects on vocational training. During its initial years, almost all the vocational training institutions were compelled to provide introductory courses for “prior levelling” to provide elementary knowledge of reading, writing, and mathematics which would give the participants the rudiments needed to take advantage of the training offered. Moreover, in many cases vocational training institutions spent their time implementing literacy and adult education programmes, either of their own or through efforts undertaken by the Ministries of Education. In other words, **the experience accumulated by the attention paid to disadvantaged sectors, plus the mandate received from the highest spheres of government, made it possible for the vocational training institutions to become among the first sectoral public agencies to be called to promote social policies formulated to achieve equity and overcome poverty, through educational endeavour.**

As the result of a substantial improvement of the levels of schooling of the population in general, the vocational training institutions gradually reduced their efforts to implement programmes of prior levelling and adult education, devoting their time to aspects more related to their specific and original mission: training for productive employment. In this sense, the expansion of

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the coverage of the regular educational systems at the primary and secondary levels allowed these institutions to gradually change the schooling requirements of their candidates for their programmes, particularly the more formally schooled ones, and move their training levels upward.

Nevertheless, in many of the training programmes of the institutions of the region curricula related to mathematics and language still prevail, and on occasion they are the same as should be provided by the regular educational programmes required as a minimum to access vocational training. Indeed, the problems of approach, poor quality or insufficiency in the formal educational area are reflected when vocational training is applied in practice.

The educational nature of training was not exhausted, however, in the mere circumstance of its relationship to the regular educational system. The training provided by the institutions was never restricted to a mere training for a certain job. On the contrary, it always tended towards an understanding of the meaning of work and the environment in which it is carried out, contributing, as well, to an awareness and appreciation of productive labour, through the development of a taste for the occupation learnt, as well as a sense of dignity and professional pride.

Today, both the regular educational system and the various training systems are faced with a new context which poses challenges of great significance. Among them, probably the greatest is the adaptation and updating of curricular content and the certifications offered for the new occupational profiles arisen as a consequence of the transformations occurring in the productive world and the new employment reality.

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No doubt this is a situation which has a greater effect on the regular educational systems than on training, which historically has greater linkages to the productive and labour world. That is one of the causes of the progressive closing of the gap between the two systems, as well as of the rise of some of the most innovative initiatives occurring in the region which tend to standardise the supply of training and education on the basis of present occupational competency profiles.

In any case, there is today a consensus, both at the political level and at that of society, that it is necessary to restructure the supply of education and training in sufficiently flexible terms to provide an answer to the diversity and mutability of the demands for qualification. No one can expect today that the initial knowledge stored in the minds of young people will last them

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their whole life, since the rapid development of the world requires a permanent updating of knowledge, at a time when basic education of youth tends to prolong itself. Education and training are, indeed, mutating; in all areas a multiplication of training possibilities offered by society is to be observed outside the school, and the notion of specialisation in the traditional sense is being replaced in many modern sectors of activity by that of evolving competency and adaptability.

This is a basically qualitative change. If before it sufficed to transmit certain technical knowledge and certain manual abilities for the individuals involved to be given a job that was waiting for them, now it is necessary to deliver a whole range of competencies which were previously insufficiently stressed: initiative, creativity, enterprise, relationship patterns and co-operation. These have to be accompanied, moreover, by the new technical competencies required, which are relatively less specific than in the past: languages, data processing, logical reasoning, capacity for analysis and interpretation of different codes, etc.

40 It is thus a priority to provide the means for people to be able to manage their own processes of occupational and vocational development: to find a first job, seek a new one, initiate an enterprising venture, re-train themselves through courses, and train themselves permanently, whether employed or unemployed, in the home or at the workplace. **In what seems to be a play on words, at the same time as the concept of “life-long employment” is disappearing, the concept of “life-long training” is emerging.** This change in the conception and practice of training involves a series of consequences which it is necessary to highlight:

- In the first place, unlike some decades ago when the dominant trend was towards specialisation, today it seems to be increasingly necessary to be able to count on a series of basic and general competencies, which serve both to perform in working environments with a lesser degree of control and more unforeseen situations which must be resolved on the spot, and to “surf” in a difficult and competitive labour market. The specific training which continues to be necessary is acquired, increasingly, on the job itself, and firms prefer to be in charge of it. The training bodies, and many programmes, begin to approach, both in terms of content and institutionally, the sphere of general or regular education. As the latter is also in the process of being revised, it benefits from this approach to the extent that vocational training provides it with experience regarding its relationship with the productive sector. Said differently, there is a synergy beneficial to both traditions and institutionalities.



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### **Brazil: SENAC contribution to research and dissemination of knowledge on vocational training**

It is well known that, in the regional environment of vocational training, there is a certain (welcome) cupidity regarding research, theoretical and technological aspects. Even if it is difficult to quantify a possible inadequacy of such intellectual production, it is appropriate to insist on some activities that have become a model of what is demanded, by undertaking and publishing research and texts of high theoretical content.

One example to point out is the “*Boletim Técnico do SENAC*,” (SENAC Technical Bulletin), a publication which has admittedly become, over its 25 years of distribution, “an obligatory source for anyone interested in dovetailing training and labour in the region; it has kept to a level of reflection, professional dependability, graphic presentation and dissemination of ideas which makes it stand out with a personality of its own among the vocational training publications of the region.” Its capacity to take “a critical approach to the key topics of meshing didactics and labour, by including scarcely appreciated contemporary sociological currents in the vocational training context, thus enriching its contribution,” has been acknowledged. This critical and theoretical approach, and reflection on the peculiarity of the tertiary sector -a sector difficult to deal with because of its heterogeneous nature- allow the *Boletim* to deal with a group of state-of-the-art topics, central to the consideration of decisions on the future of vocational training.

The function of the *Boletim Técnico do SENAC*” is clearly placed within the scope of these considerations. They highlight, besides making correct judgments on its graphics or editorial quality, an intention within the framework of publications which, legitimately oriented towards well-defined objectives, has become a significant contribution in the matter of research, reflection and dissemination of the pioneer function of the SENAC in the tertiary sector that, firstly the institution itself, and later the entire regional training community, celebrates and appreciates.

Cinterfor wishes that its member institutions -and the example above seems to point the way- besides acting together, will also include in their action theoretical aspects based on knowledge of regional realities and the particular realities of each country.

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• Secondly, responsibility for training is beginning to be shared and it necessarily becomes an area of arrangement and co-operation. If the people no longer train exclusively in the learning centres, but rather do so also in their homes and workplaces, the responsibility for training is shared among training bodies, employers, governments and the individuals themselves (and the organisations in which they take part and that represent them). Thus tripartite management is revitalised and the rise of new forms of training management also benefits. They do not acknowledge unique models: we may be talking of social or political agreements that allow, for example, the development of alternating methods or dual training, as we can also speak of production training centres congested by chambers of employers or unions. There are foundations managed by unions which are financed by employers, as well as national systems with tripartite management. But whatever may be the form adopted, the truth is that the cases increase in which there is an establishment of alliances which make it possible to take advantage of the resources that societies possess through their diverse players, in order to use them more efficiently and at the service of the ongoing and integral training of its citizens.

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• In third place, because of its very nature, for life-long training to be possible there must be an extremely flexible and dynamic supply. The progressive blurring of boundaries between branches of production at the level of basic competencies makes for infinite possibilities in terms of the itineraries covered by individuals to reach the same type of employment. It is difficult to standardise the possible demands of these people and the supply of training, to be at the level of these requirements, must be a kind of “self-service menu” where everyone may fulfill their needs for qualification in the most diverse circumstances and periods, as well as with diverse degrees of depth and different content. Moreover, the demands for training have extended and diversified due to factors such as the greater relative importance of the knowledge factor within production; the entry of great hordes to active life (particularly in the less industrialised countries); the reduction of public employment; the workers displaced from firms that are reconverting or have disappeared; or the emergence of new forms of employment and self-employment. To cater to the entire active population, employed and unemployed, of the modern sector and the more backward sectors, formal and informal, youth and adults, is not a task that can be performed efficiently by a single player, even when it has great financial resources (a situation which is moreover infrequent). There is no other alternative, even here, than to seek the dovetailing of efforts through concerted action among diverse players that, from the standpoint of their own specificity and with their own

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resources, may contribute to structuring a training system which is sufficiently broad, flexible and diverse so as to cater to an increasingly heterogeneous demand for continuous training.

In **Argentina** a reform of technical education was begun in 1996, that has resulted in the orchestration of the so-called “**Trayectos Técnicos Profesionales**” (Vocational Technical Journeys) (**TTP**) which are offers of training of an optional nature for all students or graduates of polymodal education. Its function is to train technicians in specific occupational areas the complexity of which requires a thorough grasp of professional competencies that can only be developed through systematic and prolonged training processes. The design itself of the TTP’s is an interesting and timely example of the search for integration among the various educational and training systems:

- *With polymodal education*, because the latter is a set of training alternatives aimed at large fields of knowledge and of social and productive action (in a total of five areas), and the election of which allows students to consolidate fundamental competencies in those areas in function of issues linked to their interests and motivations: through the TTP’s they access a different and additional option. We are dealing, in this latter case, with vocational initiation through training that prepares the trainee to perform in certain occupational areas that require a thorough grasp of specific technological and vocational competencies.

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- *With vocational training*, because the TTP’s complement a supply which arose, in Argentina, to target the development of the competencies required to perform in certain occupations and/or as a component of active employment policies aimed at promoting entry of groups with specific needs into the labour and social environments.

- *With life-long and higher training*, given that the function of the TTP’s is to introduce the students into a vocational journey, guaranteeing their access to a base of vocational knowledge and abilities that allows them to begin working in a first job within a certain vocational field and to continue to learn during all their active life. What is then sought is that the training provided through the TTP’s be supplemented with other educational alternatives in order to allow further levels of development, specification, re-orientation and -possibly- re-conversion of the initial vocation.

In **Brazil**, with the opening up of the international market, the demands for higher product quality levels have increased and, therefore, for worker

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qualifications. The **Vocational Training and Development Secretariat (SEFOR) of the Ministry of Labour**, jointly with the ILO, implement a project for the design of a certification system. The variety of the supply of training and the interaction of multiple players on a stage in which training is being carried out not only within the framework of an “S system” (SENAC, SENAI, SENAR, SENAT) institutional base but also through a large amount of other private institutions linked to communities or sectors, generate an environment in which occupational certification can provide transparency and facilitate the mobility of workers and the improvement of the quality of training.

The proposal for the system is considering the multiple experiences in the area of vocational training which exist and are operating from nongovernmental organisations, unions and the “S system.” The introduction of the occupational competency approach is one of the critical aspects of the possible proposal; in that regard different international models have been analysed and experiences in Brazilian firms have also been identified and publicised.

44 The project has its base in a consulting group in which representatives of the Government (SEFOR and the Technological Mid-level Education Secretariat - SEMTEC), of workers (CUT, Fuerza Sindical, CGT), of the SENAI and of the National Confederation of Industry (CNI) participate.

This group, supported by external consultants and through the organisation of various workshops to analyse national and international experiences, is already studying a proposed certification scheme. It is expected that the proposal will be completed this year and, at the same time, some pilot experiences will be developed and other existing experiences will be documented before formulating a final design.

A special feature of this experience arises from the participation of SEMTEC, in an approach to the mid-level technical education and vocational education proposals. The framework created by the new Law on Basic Guidelines for Education enabled SEMTEC to initiate work regarding certification and the introduction of the competencies approach. The aims from the standpoint of education and of labour have much in common and joint action is making possible their alignment.

Another example of integration between the vocational training system and the higher education system is to be found in Brazil, with the creation, in

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1997, of the Textile Industrial Engineering Course, through the Chemical and Textile Industry Technology Centre (CETIQT) of the SENAI of Rio de Janeiro. This innovative offer aims to train professionals specialised and skilled for the rapid development of knowledge, for working in multidisciplinary teams and for exercising leadership focused as enterprising and management action, as well as for perceiving the importance of environmental control and for understanding organizations and business.

### **Brazil: the development of higher vocational education**

The National Service of Industrial Training (SENAI), of Brazil, is currently consolidating its action at the higher level of technological education through courses like the one on Textile Engineering, imparted at the National Technological Centre of the Chemical and Textile Industry (CETQT), and the course on Graphic Arts and Mechatronic Technology, both conducted by the Sao Paulo SENAI.

The Santa Catarina SENAI has been authorised by the National Education Council to impart a course on Industrial Automation Technology, at its Automation and Information Science Centre (CTAI). The Minas Gerais SENAI and the Euvaldo Lodi Institute (IEL) will start a Master's Degree on Automotive Design in the second half of 1999. This pioneering initiative for Latin America is being jointly developed with the co-operation of the Fiat Company and the Federal University of Minas Gerais (UFMG). Courses will be held at the SENAI Centre for Graphic Design and Technology, at the Design School of the UFMG and at Fiat facilities.

Other high-level courses, either solely SEANI's or in collaboration with universities, await approval by the Ministry of Education. They cover areas like Garment Technology, Teachers' Training, Environmental Management, Cabinet Making, Leather and Footwear.

All these initiatives are the result of a careful process of short, medium and long term policies aimed at placing the CNI-SENAI system in the forefront of changes, in order to meet the demands of the productive sector and society in general, in a permanent search for innovation and improved occupational competencies.

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The course added to its curriculum some novel aspects: management, environment, quality, humanities, technical standards, safety, sociology, politics and legislation. Its creation seeks to meet the aspirations of textile line employers: from the rural producer to the manufacturers and distributors, who seek to modernise and increase productivity and competitiveness in the sector in the internal and external markets.

A Graphics Technology course was added, in 1998, to the Textile Industrial Engineering Course. Through the SENAI “Theobaldo de Nigris” School, in Sao Paulo, this course, also a pioneer endeavour in Brazil, is to train professionals by solid development of their scientific and technological skills which will allow them to take part in the management of production, administration and business in the graphics area. Lasting three years and with a workload of 3,200 hours, the project was based on European and North American models for training graphics engineers. Along these same lines, the SENAI is preparing to launch new higher courses in the footwear, paper and food areas.

46 In **Honduras**, the Programme of Education for Labour (POCET) is a Central American example of this alignment between the regular educational systems, and especially adult education and training as life-long education. It is one of the first and richest experiences of integration between traditions among which historically there was little linkage and, at the same time, an experience of dialogue of those traditions with the new debates and paradigms that have involved cross-sectionally the spheres of education and vocational training, in which the new ideas regarding life-long education and training should be specially highlighted. In this case the Ministry of Public Education of Honduras and the National Vocational Training Institute (INFOP) have acted in an integrated manner, at the same time incorporating methodological approaches which are usually only to be found among nongovernmental organisations.

In this regard, the POCET programme is a central reference point for a whole tradition established around the principles of adult education, with its assistance-providing cast and its orientation towards literacy. POCET signalled the way towards integration of the contributions made at the time by all those linked to various forms of popular education with other currents -such as vocational training- with long experience in the field of education for productive labour. The latter currents are also deeply involved in profound debates arising both from the emergence of new production and labour paradigms and the employment market changes and from the persistence of groups and sectors that are left out.

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In the case of **Mexico**, an experience was begun in 1995 by the Occupational Competency Standardisation and Certification Council (CO-NOCER), the most important initiative with the greatest scope in the field of occupational competencies in the region. It was an answer to interest on the part of the Government in achieving the participation, among other mechanisms, of the players, by stimulating demand with the aim of supporting the design and development of training based on competency standards and their certification.

The occupational competency system which has been applied includes the following main components:

- To define technical occupational competency standards by branch of activity or occupational group, to be implemented by the social partners with governmental support.
- To establish mechanisms for evaluation, verification and certification of knowledge, abilities and skills of individuals, regardless of the way in which they have been acquired, providing they meet technical competency standards.
- To transform the supply of training into a flexible modular system based on competency standards in order that individuals may move among the modules according to their needs.
- To create stimuli to demand, in order to promote the new system among the population and firms, seeking an equitable distribution of training and certification opportunities, and also catering to the needs of the disadvantaged population.

Following the creation of a system of national coverage, greater stress is laid on the definition of standards for the more general functions in the different economic branches, technological languages and occupational areas.

Finally, this initiative is conceived from the standpoint of finding a valid alternative to link the different types of education and training with the country's employment demands. The challenge is to approach the modernisation of educational and training -for- labour systems, not only so that they respond to the exigencies of adaptation to the new conditions of the economy and technology, but particularly to cater to the need to make education and training available to all sectors of the population, with suitable

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and relevant content and with the quality required by the labour market. At present there are 45 Labour Competency Standardisation Committees operating in Mexico, 57 pilot projects are being carried out in firms of different sectors of economic activity to foster skill development and training of individuals, and seven certifying bodies and nine Evaluation Centres have been accredited. On 13 December last, the first 120 Labour Competency Certificates were distributed.

In **Uruguay**, the National Employment Bureau (DINAE), with the co-operation of the IDB, is carrying out a project to study, design and prepare the implementation of a standardisation, training and certification system in occupational competencies. To do so, the project is planning to establish a single register of training bodies and is working on four large areas: a comparative survey of competency systems developed in other countries in order to determine whether they can be implemented in Uruguay; information and training activities involving all the players in society; development of pilot experiences of competency standardisation in different economic sectors; design of a technical proposal and possible strategies for the implementation of a National Competencies System.

48 Moreover, in the same country, an exhaustive educational reform has been under way since 1995, structured on the coordinates of a search for equity and quality upgrading. In vocational-technical education, the reform proposes to achieve coherent interconnected and high quality technical and technological education, which, as well as attending to its specific tasks (to provide efficient and multivalent training to co-operate with the transformation of productive structures and improve the living conditions of workers), dovetails with and complements Secondary Education in an effort to provide the population with thorough basic and mid-level education. With this aim, the **Technical-Vocational Education Council (CETP-UTU)** is restructuring and re-formulating the education it supplies, the main novelties being the implementation of the Basic Technological Cycle and the Technological Secondary School Certificate. The former is divided into two areas: agricultural and technical, and it proposes to internalise technological culture in adolescents and develop competencies on which a later and complementary, broader and more modern, vocational option may be based. The technological secondary school curricula, three years in duration, with the double aim of being an instance of final mid-level education and granting a Technical Assistant certificate, are designed to be the intellectual, technical and manual ability base providing interdisciplinary and cross-sectional content and approaches, around an organising core or nucleus responding to the main



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fields of development of the national economy and structured around occupational families. Thus, in 1997, the following disciplines were implemented: Industrial and Basic Chemistry, Thermodynamics, Data Processing and Maintenance, Administration and Services, and Agricultural Technology. The secondary school certificates make possible either entry into university or continuation of technical specialisation studies, in the CETP itself, seeking thus to attend to the training of mid-level and higher technicians according to the training demands of the productive sectors.

The aims of this reform are very explicit regarding developing in young people a solid general education, well grounded in science and technology and with the knowledge, abilities and skills which will allow them to be flexible and adapt quickly to change and to life-long learning. The starting point is a conception of Uruguay as a small country in the process of development and inserted in a world subject to constant economic, scientific and technological change. The belief is that the educational challenge involves preparing its human resources and its economy for a life of uncertainty. It is thus believed that the symbolic languages to be grasped thoroughly go beyond the capacity to express oneself and communicate orally and in writing, and include computer science, telematics, foreign languages and critical evaluation of audiovisual messages. Also indispensable are a mastery of scientific methods and knowledge in order to understand, interpret and handle natural and social phenomena; acquirement of mathematical competencies to acquire methodology and mastery of strategies for identifying problems and solving them; and a change in socio-historical competencies from the standpoint that cultural boundaries and world geography are becoming imprecise and satellite communications modify information-handling radically. And, last but not least, it is necessary to acquire a technological culture that facilitates the integration of youth into the world of production and labour and their understanding of its technical and social dimensions.



## New institutional picture of training in the region

Any attempt to describe the ways in which training is currently being structured and organised in Latin American and the Caribbean is inevitably more difficult and complex than it was in the past. Until at least two decades ago, a typology with only three categories was sufficient to represent, in an approximate manner, what was going on in the field of training in most of the countries. The typology was as follows:

- Countries where training was centrally designed, planned and implemented, by a public body, formally dependent on the Ministry of Labour, with tripartite management, financed by a specific levy on payrolls, of national coverage and with varying degrees of administrative and functional decentralisation. Such were, among others, the cases of Colombia (Servicio Nacional de Aprendizaje, SENA); Costa Rica (Instituto Nacional de Aprendizaje, INA); Ecuador (Servicio de Capacitación Profesional, SECAP); Guatemala (Instituto Técnico de Capacitación y Productividad, INTECAP); Honduras (Instituto Nacional de Formación Profesional, INFOP); and Nicaragua (Instituto Nacional Tecnológico, INATEC).

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- Countries where training was dispensed by one or several entities with the same characteristics of the above, but managed by the main corporate organisations of the country. Such were the cases of Brazil (Servicio Nacional de Aprendizaje Comercial, SENAC, e Industrial SENAI); Peru (Servicio Nacional de Adiestramiento de Trabajo Industrial, SENATI); and Mexico (Instituto de Capacitación de la Industria de la Construcción, ICIC), and others.

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- Countries where training was included among the structures of regular education, specially secondary technical education, without becoming a mainstream trend. Such were the cases of Argentina (Consejo Nacional de Enseñanza Técnica, CONET) and Uruguay Universidad del Trabajo, UTU).

Although it was not an exhaustive typology covering each and every case, the fact was that whatever was left out could be considered an exception. For example in Venezuela the Instituto de Cooperación Educativa (INCE) was a variant, since it was an autonomous body attached to the Ministry of Education, comprising a number of specialised sectoral institutes also connected to other public and private organisations; or else in Peru (Servicio Nacional de Capacitación para la Industria de la Construcción, SENCICO), attached to the Ministry of Housing. In Cuba, the Centro Nacional de Capacitación y Superación Técnica (CENSUT) is another example of a sectoral body dependent on yet another Ministry: the Ministerio de la Construcción.

52 Already at that time, however, this orderly and relatively simple institutional picture was beginning to show signs of change in the region. In Chile, although INACAP had seen the light as a public institution, as a result of the promulgation in 1975-76 of the Social Statutes for Enterprises and for Training and Employment, the role of training institutions was modified, and the Institute underwent a process of political, institutional and administrative transformation. It broke away from the State and began to act under similar conditions to those of other technical executing agencies recognised by governmental authorities. Simultaneously, the Servicio Nacional de Empleo (SENCE), started operating in 1976 under the aegis of the Ministry of Labour and Social Security, as a regulatory, administrative and financial body of the national training system. This was by itself an anticipation of what would later become a regional phenomenon: the greater participation of Labour Ministries in the field of vocational training.

In a similar manner, the Manpower Secretariat (SMO) was created in Brazil under the Labour Ministry in the sixties. Its continuation is today the Vocational Training and Development Secretariat (SEFOR) that seeks to find a new form of State action, promoting the supply (both public and private) and the demand of training through various programmes. Different units and services quickly emerged within the Ministry to deal specifically with the subject.

Partly as a result of the programmes themselves implemented through Labour Ministries, aimed at promoting training at enterprises or targeting

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specific population groups, an overwhelming supply of private training started to grow, stimulated by a double incentive: public tenders, and training services that were tax deductible.

After these two new elements came into play, the above typology began to change drastically. Training institutions fulfilled the function of providing national guidance regarding policies for the development of human resources, and were at the same time hegemonic in implementing training actions; this situation began to falter. On the one hand, Labour Ministries took a leading part, sometimes displacing institutions, sometimes co-existing with them, so that their predominance declined. On the other hand, insofar as a private training offer emerged, their hegemonic role was put in question.

Considering just the appearance of Labour Ministries on the training scene as leading players, two further categories have to be added to the former typology:

- That of countries (like Chile) where the national public institution (INACAP) becomes a private body comparable to any other in the market - at least formally- and where the Labour Ministry (LbM), through a specialised service (SENCE) lays down the rules of the game in connection with training supply, offers special programmes for certain population groups and manages a system of tax incentives to encourage training demand.

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- That of another group of countries (like Brazil) where also the LbM, through a specific unit (SEFOR), assumes a central role in the setting of guidelines for training and the development of human resources, manages training funds and conducts programmes for different populations, or promotes the implementation of training projects by other agents (like trade unions), along with the activities that the older institutions (SENAI, SENAC, SENAR or SENAT) continue to carry out.

The growing complexity of the regional training scenario does not come to an end here, however. In all countries of the region productive and labour players have shown a renewed interest in the management of funds and resources allocated to training. Many entrepreneurial organisations –as well as trade unions– have at some time or other questioned the way in which national training bodies were being managed. In some cases, criticism has led to processes of deep institutional transformation, it has adapted institutions to new challenges and requirements that had been raised (case of the INA of Costa Rica). In others, the process culminated in a modification of the nature

### **Dominican Republic: profile of a vocational training institution**

Since its establishment in 1980, among other objectives, the aim of the the National Technical Vocational Training Institute (INFOTEP), the most important official vocational training body in the Dominican Republic, has been to *organise a National System for Technical Vocational Training and Promotion of Workers with the joint efforts of the State, workers and employers*. This “systemic vocation” of the INFOTEP accelerated particularly during the nineties, leading to the development, starting in 1995, of a Strategic Plan called INFOTEP 2000.

Within its fundamental strategies, the INFOTEP 2000 Plan adopted the following:

- To stress especially the efficacy and efficiency of the National Occupational Training System
- With certain exceptions, and where possible, to transfer to the Co-operating Centres the direct massive training of the labour force and employers, devoting itself mainly to indispensable functions
- To preserve the INFOTEP centres as a means for Vocational and Methodological Training of teachers for occupational training, demonstrating expertise in training methods and disseminating new technologies related to the main occupations in the economy
- To continue to carry out occupational training programmes until their viability has been demonstrated, to then transfer their implementation to direct implementers.

It is thus that INFOTEP, while acknowledging the existence of other private and official bodies offering training, assumed the responsibility in their regard to co-operate with their development, to stimulate them and, also, given its prestige, to serve as an intermediary body so that the others may obtain, through international co-operation, projects which contribute to upgrade their operational capacities. The National Occupational Training System thus includes, according to INFOTEP, all the bodies and groups with a common interest in its mission. In this respect, the Institute seeks to create a forum for exchange and co-operation to benefit its members, within the framework of a structure that allows optimisation of the efficiency and efficacy of the System. Moreover, it acknowledges that participation must be voluntary and motivated.

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of institutions, which from public and tripartite turned into private and non-profit, managed directly by national or sectoral corporate chambers (case of INFOCAL, Bolivia).

## **1. Coming closer to a typology of organisational arrangements in Latin America and the Caribbean**

The diversity and wealth of regional training experiences would justify a detailed, case by case description of the progress and innovations attained. Nevertheless, in order to develop a typology of what is currently happening in Latin America and the Caribbean we must necessarily observe a certain degree of abstraction that inevitably leaves out many of the specificities of a case by case analysis. Abstraction also implies adopting a number of criteria to gather examples from the different countries on the basis of common traits that have to do, precisely, with the way in which training is organised at national level. To be useful for building a typology, those criteria have to be restrictive.

Besides, in that task definition of the analytical unit is decisive for the categories that make up the typology. There are three alternatives that could be used for units: countries; organisational arrangements; and training players. We have opted for organisational arrangements as analytical unit, rather than the countries that have adopted them or the players on the training scene.

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There are reasons for not having chosen countries or players. The first alternative –taking countries as analytical unit– has the drawback that apart from what has been called “predominant arrangements” there is a whole range of heterogeneous training offers with varying degrees of maturity and development. To design a typology covering all those possibilities is particularly difficult; if achieved at all, it may include too many categories with too few cases each, which would be more like a case by case description than a general classification.

In turn, the alternative of taking the players as analytical unit raises another type of problem. Although in countries where the training offer, both in terms of policy definition and operation, is in the hands of a single player, the task could be quite easy, the truth is that the model does not apply to many countries of the region. In fact, an updated and useful typology to understand what is going on in the field of training, has to account not only

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for existing actors but also –and fundamentally– for the roles they have taken on and the interrelations among them.

This does not mean, however, that it is not possible to make classification efforts on the basis of the two alternatives that we are discarding, with different criteria from our own.

### **Costa Rica: quality management in a vocational training institution**

The National Training Institute (INA) of Costa Rica extended, this year, an invitation to the First Accreditation Forum to firms providing courses, seminars or programmes for skills development and vocational training. The objective of this service at the national level is to ensure that the conditions under which training activities are developed fulfill the quality standards established by the system.

The history of this pioneer initiative harks back to 1996, when, in the framework of a new structure which helped to make major changes in the Institute's activities, special stress was laid on the incorporation of the concept of quality and customer service. In that regard the Quality Assurance Programme and the Accreditation System Certification Project were jointly launched. The Technical Standards Institute of Costa Rica co-operated in the development and monitoring of this project, and the certifier chosen was the Spanish Standardisation and Certification Association (AENOR). After several stages of intense work, the INA Accreditation Unit obtained, in January of this year, the certification issued by INTECO and AENOR according to ISO 9002 standards.

This step is also the first stage towards obtaining total certification of INA processes and services. By taking it, the Institute has been given legitimate grounds to accredit training actions that the various private suppliers perform at present in Costa Rica. However, it is not obligatory for private training bodies to submit to an INA accreditation process. On the contrary, as in other areas of activity, to exercise the option to obtain this type of certificate is voluntary. The decision to do so, however, allows access to a series of benefits, such as to increase the prestige of one's own training offer through a certificate which accredits that the training fulfills quality standards, to achieve solid gains and credibility in society, and, in this case, to obtain a free diagnosis regarding the quality of the training activities undertaken.



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In opting for organisational training arrangements as analytical unit, we have accepted two basic criteria regarding categories:

- First, a distinction between two levels within each one of the arrangements: (a) the level of decision-making on training policies and strategies and; (b) the operational level of direct execution of training activities.
- Second, specification of which are the players that in the last resort assume responsibility for the actions included in the two previous levels.

The organisational arrangements included here are, on the other hand, those that may be considered “predominant” in each country, on the basis of the coverage and impact they have within the training offer.

We must also make two comments concerning the final form of the typology and the distribution of countries within it. Firstly, in no way are we making a value judgement or trying to establish which kind of arrangement is “better” and which “worse”. The social, economic and political contexts in which they emerge are too complex to justify opinions that, to say the least, would be extremely rash. The various types of arrangements submitted here, have shown different drawbacks, hits and misses that we will not go into now. Secondly, there is a number of dimensions that we are not taking into account here, such as: quality of the training imparted, public or private nature of the bodies in charge of activities; management structure (tripartite, bipartite, State, entrepreneurial, trade union); financing schemes; degree of administrative and functional decentralisation; etc. There are at least two weighty reasons for this omission: one, including them would mean –once again– to build a typology requiring a category for every single case, that would be useless for the purposes of classification; two, all those dimensions are considered elsewhere in this document, in contexts that seem more relevant, or they are mentioned in the concrete clarifications justifying the inclusion of certain cases in some categories. The four resulting categories are:

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**A. Arrangements wherein responsibility both for defining policies and strategies and implementing direct training actions is concentrated in a single body, usually national or sectoral institutions.**

This type of arrangement is embodied in the region by: INFOCAL, Bolivia; SECAP, Ecuador; INSAFORP, El Salvador; INTECAP, Guatemala; INFOP, Honduras; INATEC, Nicaragua; INAFORP, Panama; SNPP, Paraguay; SENATI and SENCICO, Peru; and INCE, Venezuela.

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As already mentioned, over and above common characteristics regarding the organisational arrangement of training there are differences in other aspects. For example, in connection with management schemes, as in some cases they are tripartite institutions, and in other they are managed by entrepreneurial organisations. Although most of these arrangements are national institutions -covering production and service- sometimes they are sectoral bodies

However, these institutions constitute the training offer with the widest coverage in each of these countries, and the one that includes the greatest number of specialisations. They are also the arena where vocational training policies and strategies are defined and where most of the training is implemented.

**B. Arrangements wherein the definition of strategies and policies is concentrated in a single body, which also plays a predominant role in execution of training actions, where it has the complement of shared management and collaborating centres.**

Examples of arrangements of this kind are: HEART, Jamaica; INFOTEP, Dominican Republic; SENA, Colombia; INA, Costa Rica.

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Up to a point, this category is subordinated to the previous one, insofar as each one of these institutions is the main player in the field, both regarding the definition of policies and strategies and the implementation of training action. The difference lies in that in these four cases, each institution seeks to find its place in the respective national training system, which also includes extra-institutional supply. They do so through various mechanisms such as: outside contracting of courses, accreditation of training activities and institutes, co-operation agreements, support to upgrading of training, etc.

**C. Co-existence and interrelation of two predominant arrangements with different rationale. One of them is normally associated with Labour Ministries, that through specialised bodies define policies and strategies without ever implementing training action; training is carried out by a multiplicity of agents. The other one, associated to national or sectoral training institutions that may fall into the descriptions for arrangements (A) or (B).**

Cases in this category are to be found in at least three countries: Brazil, Mexico and Uruguay:

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- Brazil, where the LbM through SEFOR designs policies and strategies without implementing any actions (which are carried out by private agents, non-governmental organisations, trade unions, etc.)
  - Mexico, where that coexistence is represented, on the one hand, by the Secretariat of Labour and Social Security through its National Office of Training and Productivity, and on the other by the Secretariat of Education through its Technological Education System (CONALEP, CECATI, CETI, CBTI, etc.).
  - Uruguay, with the National Employment Office (DINAE) on the one hand, and the Council for Technical – Vocational Education (CETP-UTU), COCAP and CECAP, on the other.

The distinguishing characteristic of these countries is precisely the coexistence of both types of arrangement. But this should not lead us into thinking about separate, independent entities. Everywhere, the links and overlaps of the two arrangements are in a state of flux, which inevitably raises deep and enriching discussions about the present and future of vocational training in the respective countries. Some of the main items on the agenda of this debate are: ties between vocational training and technological secondary education; the development of national systems for the standardisation and certification of occupational competencies; management and financing schemes.

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On the other hand, in nearly all these cases there are no “watertight compartments”. Quite the contrary; in analysing tenders for courses, and the mix of executing agents of programmes sponsored by Labour Ministries, we find large participation by training institutes belonging to the other predominant arrangement.

**D. Arrangements wherein definition of training policies and strategies is wholly in the hands of Labour Ministries through specialised bodies, that do not carry out any training action. Implementation is assumed by a large number of agencies and players.**

Cases in this fourth category, and specialised bodies performing the tasks described are: Argentina, the Ministry of Labour and Social Security, through the Secretariat for Employment and Occupational Training, and the National Office of Employment Policies; and Chile, the Ministry of Labour and Social Security, through SENCE.

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Both in Argentina and in Chile there are specialised bodies under the aegis of the respective Labour Ministries that have, among other responsibilities, that of laying down the “rules of the game” regarding training supply and demand. Although financing is different, in both cases close links are established between training actions offered and active employment policies. This is done on the one hand by encouraging the demand of training by enterprises, to be implemented either with internal resources or contracting out services with executing agencies. On the other hand, training and employment programmes are designed, financed and managed for special groups, such as unemployed workers, young people, microenterprises, rural workers, ethnic minorities, etc.

We might add that in some Caribbean countries (some of the English-speaking ones and Cuba, for example) the situation of vocational training would not fit into this typology. In those countries (Belize, Grenada, Guyana, St. Lucia, Trinidad & Tobago, among others) as in Uruguay and Mexico, the management of training programmes by the public sector is one of the responsibilities of Labour Ministries under the rubric of technical and technological education.

60 Some conclusions may be drawn from this attempt at classification of the organisational forms of vocational training in Latin America and the Caribbean:

i) Even with few dimensions –as in this instance– a regional heterogeneity becomes evident in the organisation of vocational training.

ii) As opposed to what happened two or three decades ago, institutions are no longer the only players in vocational training. With variants according to the countries, Labour Ministries have seized a strategic role, to the extent that in some countries –Argentina, Chile– they are completely in charge of decision-making as regards training policies and strategies, in close conformity (conceptually and practically) with active employment policies.

iii) The distinctive features of training in Latin America and the Caribbean –in accordance with the role it plays on the technological, labour and educational scene– are not to be found in differences among organisational arrangements. In each one of the above categories here are examples of successful innovation.

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### **Jamaica: research and technical teaching development for upgrading the skills of human resources for training**

The Vocational Training Development Institute (VTDI) of Jamaica is the HEART/NTA body in charge of training and developing human resources for the entire vocational training and technical education system in this country.

The VTDI's mission is to influence, promote and sustain a high level of performance and professionalism within the vocational training and technical education system of Jamaica. Its purpose is to supply competent, qualified and highly-motivated professionals (instructors, administrators, etc.) committed to forging and maintaining a competent and productive labour force to respond to market demand.

The VTDI has a series of training programmes, of which the oldest is the *Instructor Training Programme*. This programme seeks to prepare new vocational training instructors to enter the labour market and provide complementary training and certification to instructors who have been hired prior to obtaining certification. This programme serves the entire vocational training and technical education system and includes the formal education system and HEART programmes, as well as the private and nongovernmental sector programmes.

The *Programme for the Development of Managers and Administrators of Vocational Training Institutions* seeks to train management and administrative staff possessing in-depth knowledge of the vocational training and technical education system: its operations, principles and practices, as well as the management ability needed to lead efficiently a vocational training institution or programme.

The *Trainer Training Programme* has been developed and implemented for people who, as part of their management or supervisory work, fulfill a training or skills development function.

As the leading institution regarding technology applied to training, the VTDI is constantly researching and experimenting with new technologies. At present it is carrying out a long-distance education programme, focusing on training and development of instructors, both of the HEART itself and of other training bodies in Jamaica.

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## **2. Expanding the boundaries of training: arrangements that favour links with regular technical and technological secondary education**

As already indicated, there are several possibilities and alternatives to describe as faithfully as possible what is happening on the training scene in the region. In the previous section we made a preliminary effort to outline a typology of the organisational arrangements inside training. Here we shall try to supplement that view by looking at other arrangements that, together with the ones above are indeed examples of greater co-ordination between training and regular education, specifically with technical-technological education at secondary level.

The blurred borderlines between general education, vocational training and technological development analysed in Chapter II are also becoming evident in the organisational and institutional spheres. They are bringing about a new management model into this multidimensional scenario, whose basic instruments are co-ordination and co-operation.

62 If we really wish to build mechanisms for lifelong updating and further training, with entries and re-entries into the training process, with appropriate opportunities for the acquisition of new practices and innovative knowledge, supra-institutional arrangements are required to implement this new conceptuality.

Barriers have disappeared between manual and non-manual labour, between thought and execution, between technical know-how and academic knowledge. It has become increasingly obvious that knowledge stems from a balanced combination of social aptitudes, fundamental scholarship and mastery of innovative technologies. Under such circumstances, many countries have already started to erect new systemic structures, reflecting this essential co-ordination and encouraging not only the blending of efforts and proposals but also –based on recognition of the strengths and weaknesses of different areas of scientific, technological and/or methodological knowledge– the allocation of responsibilities and resources, in order to provide for the overall training and constant updating of the human capital. The bottom line is to make organisational arrangements respond to the concept of integral objectives, resources and strategies.

If it is possible to contribute to the mastery of the basic codes of modernity as early as in primary school, it is essential to build a continuum of the

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teaching-learning process from childhood throughout life. To that end, there is an increasing need to co-ordinate and distribute responsibilities among elementary education, vocational training and higher education, as well as integrating national levels with provincial and local authorities, share funding between public and private sectors, combine strategies for initial, mass training with remedial or circumstantial training, and use schoolroom techniques but also non-conventional teaching approaches (distance education, interactive education, multimedia resources, etc.).

### **Peru: institutional transformation of a vocational training body**

The National Industrial Technical Training Service (SENATI) is a body created in 1961 upon the initiative of the National Industries Society. Aimed at vocational training of staff of the Peruvian manufacturing industry, 90% of the institution was financed, until 1992, through an obligatory contribution from industrial firms with more than 5 employees, involving 1.5% of the total pay to the workers. As of that year, however, this situation changed radically: the scale of employer contributions was progressively reduced until, as of 1997, it amounted to an obligatory contribution of 0.75% by firms with more than 20 workers. Furthermore, the administrative expenses of the institution had to be less than 10% of its expenditures budget.

Obviously these, and other, changes occurring in the SENATI posed a very significant challenge which is was only possible to meet through an in-depth institutional transformation. This included, in the first place, a simplification of the organisational chart of the institution, with a reduction in intermediate levels. In second place, employer participation in the National Council, area councils and support committees was increased significantly. The administrative staff was 39.1% of total staff in 1992, while only 15.4% in 1997. Efficiency levels attained were such that even with the reduction in income, the SENATI managed to create more operational units (from 4 in 1985 to 40 in 1997), raised the professional level and the experience of its instructors, implemented new programmes (among which the engineer training programme being carried out at present) and multiplied its total registration from 39,000 participants in training programmes in 1990 to 128,700 in 1997.

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One of the first regional incidences of this kind of effort was the **Project on Technological Education and Modernisation of Training**, implemented in Mexico as from 1993. It had from the beginning the joint support and co-sponsorship of the Secretariats of Public Education and Labour and Social Security. The employers' and workers' sectors also participated from the start.

Modernisation of technological education and training were part of a general strategy for the overall reform of education in Mexico. The need had already been detected to introduce deep and long-term changes in the national education system, among which was the establishment of a qualitatively different training system, capable of meeting the needs to qualify human resources in a timely and efficient manner, by means of viable, flexible and better services.

64 One of the more structured current manifestations of this tendency is the recently implemented **National System of Technical Education for Competitiveness (SINETEC)**, of Costa Rica, aimed at co-ordinating the activities technical secondary schools, the Technological Institute, the various universities, the INA and employers' organisations interested in dispensing training, in order to upgrade the competitiveness of Costa Rican men and women. Before this supra-institutional organisation saw the light, Costa Rica had already piloted other forms of complementation and co-ordination like, for example, financial assistance by the INA to technical schools or the training of technical teachers by higher education institutes.

Other instances of path towards the constitution of an overall system are to be found in **Colombia, Jamaica and the Dominican Republic**, where large training institutions have been systematically trying to go beyond the traditional boundaries of vocational training and share undertakings and responsibilities, regarding both curricular development and teachers' training and technological advice, with technical and higher education. As we saw in the preceding chapter, already pointing in this direction –although in a less structured manner– are the higher level courses of SENAI (of sound scientific –technological basis) and the reforms of secondary education carried out in **Argentina and Uruguay**, where stress is being laid on the development of a technological secondary education and on co-ordination with universities to implement short careers at higher level, in keeping with the needs and demands of the productive sector.



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### **3. Funding of vocational training in Latin America and the Caribbean: just a financial problem?**

Another way of attempting to describe the current situation of training in the region –besides the analysis of organisational arrangements and links with regular education– is through a study of existing financial schemes.

During the nineties, and specially in the last few years, the financing of Vocational Training has become a very important item on the public policies agenda of the Latin American region. Until the preceding decade it had not been a priority, for several reasons:

- Two large vocational training and/or technical education systems had become consolidated: a) that of Vocational Training Institutions (VTIs), with a tripartite regime and a financing mechanism via para-fiscal levy; and b) that of Technical Secondary Education (TSE) integrated into regular education systems, with their respective variants from one country to another, and their evolution in time. These two systems coexisted in most countries, with predominance by one or the other, according to the case. Both were (still are) financed with public resources, either through appropriations in national, provincial or municipal budgets in the case of TSE, or through para-fiscal levies in that of VTIs which –regardless of their source and of the greater or lesser participation by private agents (employers and workers) in their management– are official entities acting in the public sphere, that were created by the State through governmental and/or legislative acts (an atypical case, due more to historical or cultural-juridical reasons, but not invalidating this general picture, is that of the Brazilian “S System”).

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- Despite the fact that –as has always been the case– the direct effort of enterprises to train their manpower was obvious, the relative stability at the time of technological foundations, and of the organisational structure of the productive apparatus, turned training into a rather secondary activity, with a predominance of informal practices, that did not in general entail significant investments.

- Private offers already existed of technical education and occupational training, but their scope and incidence were limited, so that cumulatively their incidence was only relative, both in terms of investment and number of paying customers.

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- The above supply was basically sufficient and adequate for the skilled labour needs of economies whose change dynamics were weak and that enjoyed the protection of tariff barriers against the competitive pressure of international trade. It was also sufficient to meet the populations' demand for training and technical education services because, although demographic expansion was in full swing, demands for educational services converged upon general secondary courses, while at the same time the offers of VTIs and formal TSE systems abounded.

But as already pointed out, the situation changed drastically in the last decade. We need not dwell on the factors that caused the change: the internationalisation of trade, the acceleration of organisational and technological developments, the flexibilisation of labour markets, the emergence of lifelong education as a paradigm in the occupational itinerary of workers and in the processes of productive development, etc.

These factors have brought the training of human resources –and vocational training in particular– to the forefront of the agenda of development policies, which in turn has cast doubts about the capacity, relevance and importance of traditional public structures of training for work and has favoured the emergence of other offers, some of them already existing in a small scale, others quite novel and the result of economic, technical and social evolution.

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Together with this questioning of the capacity of traditional, centralised public services to respond in an efficient, pertinent and timely manner to the needs of the productive apparatus and the demands of populations, came recognition of the emergence of a market of labour competencies with a variety of suppliers – some of them public but mostly private. They provided a decentralised offer: non-formal, private training bodies, expanding training services in firms and enterprises or at institutions financed by them, technological development centres combining innovation and transfer of technology through training, NGOs that provided training, etc.

This means that at the same time that a great amount of public resources continues to be poured into traditional systems, private investments grow in volume and diversity (unfortunately, there are no reliable studies to quantify them, even approximately). In any event, the economic drive does not seem to be lacking either by the State or enterprises and workers, in support of initial or ongoing training. Investments are made:

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- By the State, in financing its TSE structures and –in the case of VTIs– in the application of resources from para-fiscal contributions.

- By enterprises, in in-house training, external contracting or other outsourcing mechanisms.

- By private training suppliers.

- By people who buy services in the private market.

We might draw the conclusion that the main problem in approaching the subject of financing of vocational training is not so much the volume or source of funding, but the rationalisation of this cumulative investment. This implies rationalising the supply of training, including quite naturally the reform of traditional structures.

This reform, however, is no internal matter of traditional systems: it pertains to their co-ordination and synergy with the new suppliers, and depends on the fact that they must link up with systems that had been relatively independent, like elementary and post-secondary technological education. In other words, we are saying that the problem of financing is subsidiary to that of institutional organisational arrangements, which in turn must be reconsidered by players.

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The problem can be approached in many ways, and each way will appear differently in the various national contexts. In Latin America there are several possibilities that we enumerate below in a purely exploratory fashion. Different models could be derived to deal with the matter of financing in the more systemic context of national offers of occupational training:

- A. Subsistence of systems of public financing of training at enterprises, with resources obtained through levies or para-fiscal contributions with specific allocation. Allocation is not always direct and exclusively for vocational training; sometimes it covers areas like the re-adaptation of workers laid off as a result of industrial restructuring or State modernisation, which include occupational retraining, managed now by new agents, like Labour Ministries.
- B. Subsistence of the model of public financing of training at enterprises through formal TSE systems. The new aspect of this is the growing importance of decentralised administrations (federal states, provinces,

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departments, municipalities) in the financing of this service, either with their own resources or with transfers from the national budget, pursuant to decentralisation policies.

- C. Emergence of systems of tax incentives, whereby enterprises recover their expenditures when they file in their tax returns. Such is the case of Chile, where enterprises that spend on training can get back their expenses when they pay their income tax, up to a ceiling of 1% of the total payroll.
- D. Emergence of a number of permutations, particularly in VTIs, using mechanisms to open and flexibilise procedures. For example Brazilian enterprises can have exemption agreements with SENAI so that instead of paying in to that institution, they can use directly part of their contribution. But this must be authorised by SENAI, and that part can only be used to contract courses with it. In Colombia, enterprises can co-finance in-house training plans with SENA, and get reimbursements equivalent to 50% of their para-fiscal contributions.

In various ways, some promising financing strategies are becoming apparent in the region, as they seem to fit in with new socio-economic and institutional developments. There are three main aspects:

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- The setting up of alliances or associations of the State with private executing or intermediary agents, to support training. In this way enterprises taking advantage of tax exemptions (the Chilean case), VTIs, managing authorities of TSE or official agencies in charge of training programmes targeting special populations, as well as Labour Ministries, Social Solidarity networks, and others, are free to contract training services with a wide range of suppliers. This breaks away from the prevailing merging of financing and execution of training services, and promotes the autonomy of regulating, financing and executing bodies. In summary, it entails a radical reshaping of the traditional scheme of public and private domains in occupational training.
  - The diversification of State agents in vocational training: they are no longer confined to Ministries of Education and VTIs; new players have entered the field, like Labour Ministries, Social Welfare Secretariats, or Solidarity Funds, that have become public financing sources. This has been aided by the tendency to engage public and private agencies, with which the traditionally large investments to launch training services seem no longer necessary; advantage is taken instead of private initiatives and resources, whether profit or non-profit making.

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- Greater participation by firms and enterprises as investors and/or executing agents in the training of their workers.

All this has led to the creation of veritable training markets, in which multiple public and private suppliers compete with each other. This trend is very favourable to stimulate the relevance, flexibility and efficiency of training, but there is a risk that market mechanisms, as well as greater leadership by enterprises, may result in a training offer aimed at those who can pay, or at meeting the more immediate needs of enterprises; or in low quality offerings, lacking sufficient added value or the cumulative knowledge of the training delivered by institutions.

For that reason, and owing to the need of injecting rationality into these markets, shaping them in consonance with the strategic need of providing integral training for the labour force, it is essential that the State should adopt an extremely active attitude, although completely different from its traditional role: it need no longer be the financing agent and supplier of training, but should instead play the following roles:

- Financing all training endeavours for the supply of basic, across-the-board skills, that in an open market private agents can hardly be expected to fulfil.

- Organisation, regulation, technical assistance and quality control of the training offer as a whole.

- Creation and promotion of truly integral training systems of occupational training, incorporating the already described diversity of suppliers and financing sources in a synergic way.

All this implies deep changes in the institutionality of training, in concrete terms in VTIs. But it also emphasises that it is important that those changes should be guided and conducted by a public institutionality that – although renewed – may ensure compliance with strategic goals for national development, and provide attention to vulnerable population groups, in line with solidarity and social equity principles.



## Participation and decentralisation

The changes in the organisation, management and conception of vocational training that we have outlined in this document are directly related to the transformations that have taken place in their respective contexts.

Such is the case of the phenomena underlined in Chapter I, on training scenarios, where we showed that training has been adapting to the new concept of lifelong education, to the ways and the speed at which the processes of innovation, development and transfer of technology are occurring, and to the emergence of different and complex labour relations systems.

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In our approximation, in the second Chapter, to a typology of regional training, we noted that training is currently endowed with a more varied and heterogeneous cast of players, which has notoriously influenced the organisational arrangements that are being adopted.

It seems obvious, on the other hand, that educational, technological and occupational transformations as well as those relating to the roles of historic players in training, and the advent of new players, in turn stem from changes of a more global kind. They govern not only the new reality of training, but practically all areas of political, social, economic and cultural activity in our societies. In that respect, we cannot but mention the progress of globalisation and internationalisation of economies; the frequent modifications of the development strategies of countries of the region and the speedy growth of information, knowledge and technology flows, and their influence on the new forms of production and work.

This scenario of multiple and interdependent transformations includes other dimensions that also point to the changes experienced by the training

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dispensed in the region. Two of them are fundamental and complementary: **a) there are today greater decentralised levels than before in the management of programmes and institutions; b) this situation stimulates and enables higher levels of participation by greater numbers of more diverse players.**

Decentralisation of training management has at least two main approaches: delegation of administrative, financial or operational tasks to territorially scattered units; and focalisation of efforts, personnel, resources and infrastructure on specific productive sectors.

72 Whatever the type of predominant arrangement in a given country, we can always find many cases of territorial decentralisation. Many vocational training institutions have begun to hand over higher levels of responsibility to their regional, state or provincial departments. Likewise, policy guidelines laid down by the specialised bodies of Labour Ministries, are interpreted and adapted in accordance with active employment policies that include training components at regional or federal state level. In Brazil, employment and occupational education plans sponsored by several state labour secretariats are an example of this. Another example is the degree of autonomy enjoyed by the regional departments of SENAI, SENAC or SENAR *vis-à-vis* their respective national departments. A great debate has taken place in Brazil, in recent years, as a result of which the concept of “occupational education” has been adopted on a consensus basis; it has been defined as an essential component of a new model of capital-labour relations, based on negotiation, and placed within a context of social democratisation, as a strategic element for the defence of citizenship.

Also in the INA of Costa Rica, the SENA of Colombia and INTECAP of Guatemala, among others, administrative and operational responsibilities have been handed down to regional departments.

Although these processes are in some cases the result of the federal structure of countries like Brazil or Mexico, they also take place in other countries with a historically centralist tradition. In any event, it allows training bodies to get closer to the specific cultural, social and economic characteristics of territorially limited districts and facilitates the involvement and participation of a whole range of players who find a natural space for action: local authorities, neighbourly associations, chambers and unions, non governmental organisations, etc.



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Examples of decentralisation in sectoral terms are also increasingly frequent. As opposed to old training centres that housed a wide diversity of specialisations, there are now centres and even institutions focusing on sectors like construction, textiles, automotive industry, graphic arts and hotels. In Chapter II we already mentioned the advantages of this concentration in terms of technological updating and diversification of services to the sectors in question. But there are additional advantages in provision of new and fruitful opportunities for participation both by employers and workers and their respective associations.

It seems impossible to give an exhaustive account of the wealth and diversity of experiences of such processes in a document of this kind. We shall try, however, to sketch out the forms and contents of this participation by a wide range of agents whose activities were not described in previous chapters. They are: the private training suppliers; action by non-governmental organisations, and employers' and workers' organisations. We shall finally devote a paragraph to local management of training.

## **1. Workers' organisations and vocational training**

In Latin America and the Caribbean, the interest, involvement and participation of workers' organisations in vocational training is notoriously higher than two decades ago, if we consider their determination and rigour in dealing with the subject, and the different ways in which they participate. Strictly speaking, these organisations have always had as a central item of their vindications, to make education accessible to all the population as a mechanism to ensure a better distribution of opportunities regarding employment, earnings and personal and social development. Workers' organisations have played a leading role in the history of vocational training in the region. Nevertheless, their participation has had ups and downs directly related to the political, social and economic circumstances that both training and trade unions went through along the years. Trade unions were part and parcel of the pioneering efforts in the region that resulted in the creation of a great number of national vocational training institutions, and continued to take part in their development from the governing boards of many of them.

This involvement, however, was undermined in the mid-seventies by a number of factors, mainly the detriment in several countries of public freedom in general and trade union rights in particular.

### **Argentina: union management of training programmes**

A clear example of the role that labour organisations can manage to play in the field of vocational training, is that of the Education and Training Foundation for Construction Workers, linked to the Construction and Related Branches Workers' Union (UOCRA). This Foundation is, today, the main and most solid training offer for the sector in Argentina. Established in 1992, at present it applies the funds included in the Research, Training and Safety Fund for the Construction Industry (FICS), in accordance with an agreement on equal terms established between the UOCRA and the Chambers of Employers in the sector. The main lines of action of the Foundation are as follows:

- Management, co-management and/or supervision activities of the different vocational training centres exclusively for the construction sector, within the framework of the process of decentralisation of educational institutions from the national to the provincial or municipal levels.
- Training programme through mobile units, performing training actions in places where there is no basic educational infrastructure.
- Participation as a training institute in the Youth Project and the Micro-Enterprise Project, promoted by the Ministry of Labour and Social Security.
- Specific training arrangements with firms, generating projects addressed specifically to fulfilling genuine employment and training demands, subsidised directly by the participating firms and with the assistance, as relevant, of state bodies and other fora.
- Technical advisory and training areas on the subjects of the Environment, Employer Assistance and Data Processing.

As can be seen, the Education and Training Foundation for Construction Workers is a sample, not only of the levels that union initiative can attain in the field of vocational training, but also of the degree of confidence that the initiative can generate in the employer and Government sectors, that channel through this body a goodly part of their training demands.

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Secondly, the different manner in which economies of the region found access to international markets, through open trade policies, radically upset the characteristics of local markets and labour relations. Until then, the representative membership of those organisations had been urban, industrial wage-earners, predominantly male. After these processes the industrial sector began to lose weight in terms of employment; participation of women in the labour force increased, as well as new contractual arrangements, self-employment, informal work and unemployment. Faced with all these developments, many trade union organisations found it very difficult to adapt to the new situation and lost bargaining power in various ways.

In the third place, together with the above transformations new notions were accepted in the region about economic development strategies and labour and production management, that were diametrically opposed to the old productive paradigms. Although they strongly emphasised technology and qualification, they tended to consider training as something almost exclusively dependent on productivity and competitiveness strategies, objectives normally linked to the employers' viewpoint. The fact often led unions to see occupational training as one more instrument at the service of capital, so that imparting it was more the responsibility of enterprises than of workers.

There is therefore a turning point, and what until the mid-seventies had been a situation of equal participation by employers and workers (although in contexts of strong State intervention) became a scenario in which workers' organisations drifted away from decision-making in vocational training, and employers took the lead in that respect. This picture saw some positive changes in recent years, owing to a number of factors, namely:

- There is a new conceptual volteface that reinserts training in the educational scenario, bringing its players and arrangements closer to regular education systems, and propounding a new idea: lifelong education. Insofar as training is recognised to be an educational fact, it is also envisaged as a tool for building a modern and democratic citizenry.

- The emergence of new forms of organising labour and production that place knowledge at the centre of productivity and competitiveness strategies, have also turned training into a key element for access to employment. Although training does not seem to directly ensure the creation of new jobs, it is possible to favour equal training opportunities, and thereby attain greater social equity in connection with employment, earnings and personal and social development.

### **Brazil: trade unions and vocational training**

Brazilian unions have gone a long way in the matter of action in the vocational training field. There are at present several examples which may be mentioned of performance both at the training programme and project execution level and regarding formulation of proposals and their submittal to and debate within diverse negotiation and dialogue arenas. Among other experiences, it is worthwhile to refer to the Workers' Schools, conducted by various unions included in one of the country's main federations, the CUT, that constitute an important precedent, both because of their conceptual and methodological innovations and because of their increasing scope. Conceived as a response to problems arising from new production techniques and the new economic context, these schools have been recognised by the competent educational agencies, maintained with union resources and have been going through re-structuring and re-sizing processes on the basis of in-depth discussions of their nature and function. Created as of 1989, these schools are part of the Workers' School Board and are currently seven in number: Norte I; Norte II "Chico Mendes"; Nordeste; Centro-Oeste; Sudeste "7 de outubro"; Sao Paulo and Sur.

Other examples of union action regarding training are the following:

*Vocational Training and Interaction Project:* begun in 1996 by the Piracicaba (Força Sindical) Metallurgical Workers' Union and Caterpillar of Brazil, its main activities are actions complementing schooling, in the fields of vocational training, educational levelling and personal and social training.

*Sao Paulo (Força Sindical) Metallurgical Workers' Union Vocational Qualification School:* established in 1992, this school trains and develops skills of employed workers, unemployed workers and young people, and provides courses for workers' children. Besides offering vocational training, the school provides first and second level supplementary schooling, the latter through the Telecurso 2000 system, in an arrangement with the Federation of Industries of the State of Sao Paulo (FIESP).

The *Project for Competencies' Negotiation*, promoted by Força Sindical, is aimed at defining, on a negotiated basis, new competencies for the metallurgical sector, resulting from a programme of vocational education that has also been the result of negotiations. This Project intends to train union leaders of the Central Union for bargaining with employers and the Government regarding new occupational competencies. It comprises six stages: awareness; sectoral diagnosis; training of leaders; dialogue with the

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Government and employers; negotiation of programmes, and further training and retraining of workers.

*Overall Occupational Training and Retraining Programme – Sao Paulo Project*, begun in 1996 by the National Metallurgical Workers' Confederation (CNM/CUT), it is financed by the Workers' Assistance Fund (FAT). It targets both employed and unemployed workers, through vocational training and first level education activities.

*Vocational Training Project for Bank Employees*: begun in 1992, this is an initiative of the Rio de Janeiro Bank Employee's Union (CUT), which also finances and provides certification of the courses.

Besides these and other projects which are being carried out by Brazilian union organisations, it is also important to mention the increasing inclusion of vocational training as an item in the patterns of union negotiation with employers.

• The explicit tie established between training and employment and earnings in the new systems of labour relations, opens up avenues for action by specialised bodies of trade union organisations to unlock a situation in which workers were losing ground. Having a closer look at the current challenges and problems of enterprises and national economies, and knowing what role training policies play therein, provides workers' organisations with a clearer insight –and consequently more clout– to play an active role at the various negotiation levels: enterprise, sector, country, even international.

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This greater involvement of trade union organisations with institutional training, can be seen both in conceptual development and in the plane of action. There is a notorious increase in the number of specialised bodies dealing with the subject in various union organisations of the region; they carry out diagnostic studies and research, produce analytical documents and make trade union proposals in that connection. A growing number of trade union workshops, forums and seminars are organised to discuss training and its links with aspects of strategic importance to unions. Trade union training activities also deal with vocational training, and are beginning to consider the links among the different types of education and training.

Regarding trade union participation in decision making and implementation of training activities, there is a wide range of experiences, in varying stages of development, showing that union players are determined to play a leading role in the field of training. The following is a summary of the different forms of trade union participation in training:

### Chile: corporate management in rural sector training

An example of direct participation of the corporate sector in vocational training is the Rural Sector Social Development Corporation (CODESSER), now called National Agriculture Society Educational Corporation, although the former initials are still used. It is an affiliate of the National Agriculture Society (SNA) of Chile, which is more than one hundred years old, and was established in 1976 with the purpose of “co-operating for the improvement of educational and cultural conditions and the technical and vocational training of people linked to rural activities; promoting, organising and co-ordinating occupational training to benefit agricultural workers; facilitating technical, health and hygiene assistance; and contributing to the improvement of rural living conditions, seeking the overall development of the rural population and its effective incorporation into the national community.”

These objectives go way back: the SNA was founded in 1838. Very soon its General Board, on the basis of an analysis of the importance of labour as the main factor in the production of goods, added another responsibility to those established at the time of its foundation: *“to improve the rural sector population, the main instrument of its work, and without the operations of which Society’s efforts would be in vain and its labour and meditations would be fruitless.”*

CODESSER activities are focused on forestry, agriculture and livestock, and agro-industrial education at the middle and upper levels, and on training of young people, employers and workers throughout the Chilean rural area. The establishments it manages (16 secondary schools through which 19 educational units operate) include 90% of the arable land of the country, and its educational activity is addressed to students of middle and higher educational levels; employers interested in updating their knowledge, renewing technologies and upgrading agricultural business management; unemployed youth; men and women involved in the SENCE training programmes; and agricultural workers interested in specialising according to their own needs. The institutional activities of the Corporation are performed in four large areas: management, education, production and community relations. The educational area includes four types of services: formal education, training, teacher development and transfer of technology.

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This institution has been recognised by the National Training and Employment Service (SENCE) as a technical executing agency (OTE) and is accredited by the Centre for Pedagogical Research and Development (CPEIP) as a teacher development executing body. It is the institution in charge of national co-ordination of technology transfer groups (GTT) which use, as their operational headquarters, the establishments that the National Agriculture Society Educational Corporation manages throughout Chile.

With regard to its projection into the future, CODESSER plans to concentrate its endeavours on formal education and teacher development; to incorporate a larger number of employers into education; and to strengthen its schools as centres that provide a link with the rural world. On this last point, it plans to expand the educational process to the entire area of the establishments it manages, changing student screening processes in order to provide greater opportunities to individuals coming from distant rural sectors whose education is more deficient but who have a real vocation for agricultural, agro-industrial or forestry work.

- Inclusion of vocational training in collective agreements –already mentioned in Chapter I– has been to a large extent the result of trade union concern about the matter, and consequent pressure in negotiations, to have clauses ensuring access of workers to training.

- The same can be said about recent labour legislation, where the establishment of vocational training as a fundamental right of all citizens, is in many cases due to active participation and lobbying by trade unions.

- Revitalised trade union participation in the directive bodies of VTIs of several countries, partly encouraged by the sectoral focalisation processes of those institutions, facilitates participation by intermediate levels, like the federations of the respective sectors. This can be seen in the summit committees and liaison committees at the INA, of Costa Rica, and at decision-making levels in many vocational training institutions of the region: INOFTEP (Dominican Republic), INAFORP (Panama), INFOP (Honduras), INATEC (Nicaragua), INTECAP (Guatemala), SENA (Colombia), SNPP (Paraguay), INCE (Venezuela), SENAR (Brazil), and others.

- Instances of direct management of vocational training institutions, foundations and programmes by trade unions. Examples of this are, in Ar-

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gentina, the Construction Training Foundation, dependent on the construction workers' union (UOCRA), as well as similar undertakings by the commerce and services, insurance, metal mechanics and other unions. In that country, workers' organisations that implement important institutionalised training activities come together in the "Trade Union Forum for the Integral Training of Workers", which acts in the sphere of the Instituto Arturo Jauretche of the General Labour Confederation (CGT). In Brazil, three of the main union federations (CUT), Força Sindical and CGT, carry out training programmes both at central level and through their branch affiliates. These experiences have considerable weight. This is particularly evident in Argentina, where the vocational training offer by trade unions is the only one that has attained permanence and a significant coverage. In fact, and although CONET still existed, enrolment in trade union programmes was larger than in public training institutes.

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- Participation of trade union representatives in tripartite bodies created by Labour Ministries, dealing with training, among other things. Examples are: the National Training Board (JUNAE), tripartite entity of the M. of L. and Social Security (Uruguay); trade union representation on the governing boards of the Fund for the Protection of Workers (CODEFAT) at national, state and municipal levels (Brazil); participation in the tripartite National Training Council, advisory body of the M. of L. and Social Security of Chile.

- In Mexico there is another tripartite experience, also in connection with the Secretariats of Labour and Social Security and Public Education: it is the Council for the Standardisation and Certification of Occupational Competencies (CONOCER), which promotes participation by all stakeholders in the development of training based on standards of competency, and certification thereof.

- First instances of bipartite management of training in the region. Example: the Foundation for the Training of Construction Workers and Employers, in Uruguay.

- Participation in new bipartite bodies, regulated by law, at the level of enterprises: Joint Training Committees, of Mexico, and Bipartite Training Committees created in Chile pursuant to the Training and Employment Statute, which establishes that programmes agreed upon with the enterprise's bipartite committee, entitle the enterprise to deduct up to an additional 20% of the expenses incurred, apart from training costs.



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- Some central unions have also managed to develop institutional mechanisms that, among other things, do research in training and related subjects, provide conceptual information to trade unions on them and act to a certain extent as “think tanks” for workers’ organisations that seek to play an active role in spheres where vocational training is discussed and negotiated. Examples are: the Instituto Jauretche, of the Argentine CGT; the Inter-union Department of Statistics and Socio-economic Studies (DIESSE), of the three main Brazilian central unions; and the Institute for Higher Trade Union Studies (INAESIN) of the Workers’ Central Union of Venezuela (CTV).

- At international level, the two main regional trade union organisations, the **Inter American Regional Workers’ Organisation (ORIT/CIOSL)** and the **Latin American Workers’ Confederation (CLAT)** have recently highlighted training in current union discussions, both through their chief delegates, trade union training activities and awareness promotion.

This listing is only part of the examples that might be quoted in a more exhaustive description, but the instances included are proof of the great efforts of trade union action in Latin America and the Caribbean to take part in vocational training. This is auspicious and positive for workers’ organisations, but most importantly, it is also beneficial for training itself. Union participation helps significantly to strike a balance among the interests at play around vocational training, already stressed by the various objectives it has to fulfil. Among other things, trade unions might contribute in promoting integrating conceptions and practices to mitigate the risk of polarisation in our societies. This refers both to individuals and enterprises. Regarding individuals, to prevent a widening of the gap between those who have access to knowledge and employment and those who are condemned to social exclusion. Regarding enterprises, to prevent the consolidation of a situation in which some have good human resources policies and make flexibility and competitiveness a banner for everyone, while others do not invest, become ossified, do not modernise and are doomed to disappear in a competitive market, thus increasing the problem of unemployment.

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## **2. Employers’ organisations and vocational training**

At present, in all countries of the region employers are being encouraged to play a leading role in various spheres, vocational training among them.

Historically, the move to create vocational training institutions started in the region with the birth in Brazil of two bodies associated to employers’

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organisations: the National Industrial Training Service –SENAI– in 1942, and the National Commercial Training Service –SENAC– in 1946. These institutions that, as pioneering experiences, left a deep mark in the region, were since their inception attached to the respective employers’ federations of the industrial and commercial sectors, and remain so to this day.

Along subsequent decades, the corporate sector continued to have great influence on vocational training, and although most of the institutions created later did not adopt the management pattern of their Brazilian forerunners, they did opt for tripartite mechanisms wherein employers lent permanent support and co-operation.

82 The changes described earlier concerning the way in which regional economies became internationalised through open trade strategies, brought about new imperatives and challenges. Significant among them were those relating to the speed of technological innovation and the requirements for updating occupational skills and qualifications. Training then appeared as a central element in strategies to raise the productivity and competitiveness of enterprises. This led enterprises and their organisations to become increasingly involved in aspects like the management, financing and methodologies of training, and to participate more actively in vocational training institutions. They also took the lead in processes whereby the management of former public institutions was taken over by employers’ organisations, or in some cases training bodies issued forth from those organisations.

In any event, and whatever the nature of training institutions (public or private), those that have most successfully adapted to the current productive, labour and technological context invariably owe their success to a permanent dialogue and interaction with enterprises, that have become priority objects of their attention.

Apart from these corporate initiatives and efforts, training practices implemented by enterprises have expanded. Sometimes, services are outsourced, but on other occasions in-house training is developed. This is a growing trend, empirically associated to the most successful competitive strategies.

On the other hand, the interest of employers in training goes beyond the concept of a tool solely devoted to improving workers’ skills. Quite the contrary, it is seen as an instrument that can also upgrade middle managers, executives and even employers themselves.

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### **Mexico: training for micro-, small and medium-sized enterprise**

In this country, the activities to support micro-, small and medium-sized enterprises have increased significantly since the implementation, beginning in 1988, of the Integral Quality and Modernisation Programme (CIMO), originally called Industrial Training of the Labour Force, and promoted by the Ministry of Labour and Social Security. In response to training, information, consulting services and technical assistance needs of these firms, CIMO has promoted a scheme to link integrated services that enables them to upgrade the quality, productivity, market know-how and modernity of management and labour relations.

The action of CIMO is carried out through a structure of Training Promotion Units (UPC), distributed in strategic locations throughout Mexico, within intermediate entrepreneurial organisations, in order to take advantage of their mustering capacity to constitute groups of firms by branches, groups of suppliers, subjects or problems in common.

Among other examples of CIMO achievements along these lines, the following may be mentioned:

- The Tlaxcala Quality and Productivity Centre, constituted by twelve manufacturing companies and their respective association, conceived as a CIMO guidelines implementing agency. The mission of this Centre is to become an instrument of support and stimulus for the constant upgrading of the competitiveness of firms, businesses and producer organisations in the region. It is achieved through overall support programmes adapted to the needs of each firm, catering to it directly or linking it up with the providers of services needed.
- The Puebla Competitiveness Development Centre (CEDECOM) is the result of joint work carried out by CIMO and the National Chamber of Manufacturing Industries (CANACINTRA). It arose from the CIMO Training Promotion Unit (UPC) that undertook, in Puebla, systematic and sustained work in the framework of training, quality and productivity programmes with micro-, small and medium-sized firms of the most representative sectors and

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branches of the region. Regarding these advances, CEDECOM is considered to be a new stage of development and consolidation.

As can be seen in the examples above, this is a pioneer activity. Although CIMO was originally a Government initiative, its approach is participational, decentralised and flexible, enabling joint action with employers' associations and the firms benefiting from it. Moreover, the UPC's are not local representations of a central agency, but rather local fora that promote a methodology of work seeking to be appropriate for the firms themselves and their organisations.

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But the influence of corporate players covers more aspects than those directly related to management, financing and implementation. Employers' organisations have also introduced their own concepts and notions of training in the diverse spheres where the subject is discussed, whether they be national tripartite or bipartite agreements, sectoral arrangements or bargaining at enterprise level. It is probably in this respect that there is the greatest asymmetry between employers' and workers' organisations. This disparity has only been lessened in the last few years, owing to the new measures taken by trade unions, as we saw above.

The following can be mentioned among the many examples of employers' participation in the field of training in Latin America and the Caribbean:

- The management of some vocational training institutions has been directly taken over by entrepreneurial chambers. This was already the case of SENAI and SENAC, in Brazil, but in recent years they have been joined by ICIC (Mexico), INACAP (Chile), INFOCAL (Bolivia), SENATI (Peru), SENAT (Brazil), CIED (Venezuela), and others. This has given corporate organisations an extremely powerful instrument regarding both infrastructure and coverage, as well as in the prior accumulation of human capital, methodologies, teaching material and knowledge.

- Various sectoral chambers have been enlarging the repertory of services they offer to their members. For instance, they have entered the areas of research and development, and technical education and training. By way of example, we can mention:

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- In Chile, the services offered by the **Chilean Construction Chamber**, through three corporations (Construction Research Corporation; Construction Educational Corporation and Construction Training Corporation); action by employers of the agricultural sector under the **National Agricultural Society**, that through its **Social Development Corporation for the Rural Sector (CODESSER)** and just in the area of education lends support to formal schooling, training, teachers' further training and technological transfer; and the far reaching activities of the **Production and Commerce Confederation**, through INACAP.

- In Venezuela, the above mentioned initiative of the companies of the SIVENSA Group, through the **FUNDAMENTAL Foundation** and the **International Centre for Education and Development (CIED)** dependent on the State enterprise Petróleos de Venezuela.

- In Mexico the **National Chamber of the Textile Industry (CANAINTEX)** through the **Textile Training Centre (CATEX)**, which besides training services has technological and quality management services; as well as ICIC, dependent on the **National Chamber of the Construction Industry**.

- In Argentina, the companies under the Graphic Arts Chamber of Buenos Aires have provided strong support to training in their sector through the **Gutenberg Foundation**.

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- In Colombia, there are entrepreneurial initiatives in the graphic arts, plastics and rubber sectors, with their Technological Development Centres **IFTAG** and **ICPC**, respectively, that promote training, among other activities.

- Besides initiatives directly related to employers' organisations, there is a great number of experiences of in-house training programmes, particularly in the larger enterprises.

- Experiences in bipartite management are beginning to be known, as mentioned in the previous paragraph, in sectors like construction and pulp and paper (Uruguay); or new management formulas at enterprise level (Chile, Bipartite Training Committees).

- Finally, the tripartite arrangements at the level of Labour Ministries where employers take active part: JUNAE (Uruguay), CODEFAT (Brazil) and National Training Council (Chile), among others.

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The main conclusion that can be drawn from this brief outline of entrepreneurial participation in vocational training, is that employers have assumed a leading role and are the players that have increased their influence to the largest extent, whether in terms of infrastructure, knowledge, conceptualisation or political influence.

Having said this, however, we must not overlook two great problems that underlie this strong entrepreneurial sway in training. The first one is that, from the point of view of the general interests of society, it is advisable that the other players involved should also have a solid presence, that can be felt in the various decisions regarding training, in order to reserve its dual role of contributing both to the competitiveness and productivity of enterprises, and to social integration, cohesion and equity.

86 The second problem lies in the very diversity of the entrepreneurial universe of the region. In that respect, there is undeniable evidence that very large entrepreneurial sectors are still barred from access to technology, credit and training. Considering that those sectors, made up by formal or informal small and micro enterprises, not only give employment to the majority of our countries' populations, but are the only ones where employment grows to a certain extent (though not much), it is clear that they should be the object of active modernisation policies. Many of the corporate organisations mentioned above are implementing action for their benefit, but it seems obvious that in order to overcome these situations, a combination of efforts, resources and experience is required that must also come from the State, workers' organisations and civil society.

### 3. Private and non governmental training offer

Something that has happened in all countries of the region is the **appearance in recent decades of a private market of education and training** (particularly training). The degree of development and consolidation of these markets differs from one country to another, depending on a number of factors. However, the main issue is not the number of private suppliers but their strengths and weaknesses to provide the different types of training that society and production require.

Anyway, the proliferation of this new training offer is clear evidence of the importance it has acquired at all levels, not only among enterprises, governments and the various productive, labour and social organisations,

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but in the population in general. Although education has always been visualised as one of the most efficient vehicles for social mobility, during a long period of the history of our countries the notion was linked to formal and regular education. To go up in the educational ladder meant having greater possibilities and opportunities of different kinds: jobs, earnings, prestige, social capital, participation. In that view, that reflected the economic and social reality of a certain period of our history, having a technical or professional career was seen with different nuances, according to the cultural values of each society and its perceptions about manual work versus intellectual activities, training for work and academic education. But it always implied, more or less, being “halfway up” in the scale of social, political and economic opportunities.

The situation has now changed radically. To begin with, we are witnessing what has been described as a “gradual devaluation of educational credentials”, meaning that they tend to lose relative value (precisely as tools to have access to certain levels of employment, salary, responsibility, prestige). This has caused a veritable “rush forward”, in which it is constantly necessary to reach higher levels of education in order to have access to the same opportunities. As educational offers are standardised, intermediate levels are “compressed” and lose differentiation in their capacity to provide that access to opportunities. It is increasingly necessary to reach the higher levels of qualification to be differentiated and to compete efficiently. Nevertheless, this is not the only alternative. The other one is to seek differentiation on the basis of an original professional profile, supplementing regular studies with a special combination of technical courses. This is also valid for different age groups: a young man or a young woman will do their regular studies, but insofar as they can they will try to take courses in languages, computer science, business administration, or technical training. An adult person, who perceives that the rules of the game begin to change in his work environment, and that the diplomas he obtained 15 or 20 years ago are no longer sufficient, will also try to grasp and handle those “new things” that new technologies bring with them.

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Building up a unique, personal profile to have access to more and better occupational opportunities, bringing knowledge up to date so as not to lose footing in the wave of technological progress are –perhaps rather simply stated– subjective reasons in the current social, labour and technical context, that explain why there is a great demand for training courses, which to a large extent has stimulated the emergence of a private market.

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Without getting to the bottom of this explosive growth of the private training offer, we must also point out that the conditions that provoked it did not exclusively stem from a “pure” market dynamics, as described in previous paragraphs, although that was also an important element. Also present in the last few decades was the advent and development of a new generation of public policies regarding training and employment; policies based on the assumption -or requirement- of the existence of a private market to reach their objectives. They resulted in programmes wherein the State had the prerogative of managing and financing, and delegated execution of training to private agents. This was no doubt a powerful incentive for the emergence and consolidation of the new offer.

An analysis of what has happened in this new sector of training offer shows that, on the one hand, it has the problem of being aimed almost exclusively at the commerce and services sector. Although this sector grows steadily in all economies, this training slant would seem to be due to a matter of costs and investments, notoriously lower to implement most courses for the tertiary sector than for industry or agriculture.

88 On the other hand, as already mentioned, it is a sector that grew under the protection of certain policies that subsidised and encouraged the emergence of a private offer: training and employment programmes for special population groups (young people, women, micro entrepreneurs, soldiers discharged from armed conflicts, etc.); and subsidies to enterprises for implementing training activities. This means to say, then, that the private training market is in most cases the result of a substantial change in State intervention, namely, withdrawal of the State from direct implementation, plus incentives and subsidies to the private offer.

Insofar as this change in the role of the State and this delegation of activities did not take place with a pre-existing private offer, but rather that the market emerged precisely as a consequence of changing public policies, weak spots have appeared in some places: low quality courses, lack of adaptation to the needs of enterprises, instability of training suppliers, etc.

These kinds of problems must be viewed in the context of a process whereby, in the medium term, a selection and consolidation of the private offer will take place. However, there are at least two aspects that remain unsolved, even assuming that private training offer will consolidate.

The first one is how to meet demands that are not immediately profitable. The typical case is the provision of training services for the more disadvantaged



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population groups. Except when –once again– there is a specific line of financing by the State, it is hardly to be expected that institutions that are mostly profit making may be interested.

To a certain extent, now comes on the scene the other type of agent that we enumerated among players in training: **non governmental organisations, and others.** These non profit agencies, very often pursuing the social and economic development of certain groups or communities, may offer training for that purpose. They frequently make methodological and conceptual innovations that are subsequently replicated elsewhere. But there is another problem here. As these organisations often have limited financing, and human resources that usually work on a voluntary basis, they are subject to a certain degree of instability, so that many of their experiences are successful for a while, but cannot be sustained.

Another aspect that cannot be properly looked after by relying solely on the private training offer, is the fact that **in order to have sense and usefulness, training services need at present to be complemented by other activities and services** As we shall see below, only the kind of training that gets deeply involved with technological innovation and transfer, that is conceived and developed in the framework of existing social relations, and that pursues long term training objectives, will reach an optimal degree of relevance, quality and adaptation to productive and social requirements.

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Consequently, both types of players –private offer through institutes and academies, and social, community and non governmental organisations– must be considered part of the new training scenario regarding execution of programmes and activities.

#### **4. Local management of training: a space for more actors and opportunities**

A part of the decentralisation processes that have been taking place in many countries of the region, is the increasing revaluation of local or regional spheres in the generation of both knowledge and wealth. Accumulated research on industrial districts and local productive systems shows the strong interconnection that exists between economic and socio-cultural phenomena, as well as the capacity of certain regions to produce, innovate and sell, regardless of the structural conditions of the country to which they belong.

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Factors like collective identity, a feeling of belonging, a spirit of collaboration and innovation, among others, facilitate the involvement and participation of a wide range of local players, without whom it would not be possible to attain the stage of systemic competitiveness that characterises paradigmatic regions regarding local development.

In this framework, occupational training, which is an important component of all active employment policies and an essential requirement for the promotion of economic productivity and competitiveness –at national or regional level– also becomes a matter of regional interest and importance. In this respect, there is a growing number of experiences in which training is planned and managed by local agents, or by institutions with national coverage that adapt contents and form to the specific requirements of the region in question.

Without necessarily including all, we submit below a number of experiences to give an idea of the way in which different countries have tried to deal with the social and economic development and training needs of enterprises and populations at local or regional level. We shall consider private initiatives by institutions or organisations, as well as the setting up of networks including a diversity of players of various kinds, whose interaction is guided by the common purpose of improving the economic and social conditions of a given region.

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In the Argentine Republic, the **Vocational Training Council of Rosario and its Region (CCFP)** was created in late 1997. It is a bipartite entity made up by trade union and entrepreneurial organisations, whose objective is the improvement and upgrading of the occupational profiles of all workers, both employed or circumstantially out of work; in the latter case they are retrained.

CCFP is directed by a Board of fourteen members, seven of which represent trade unions, the other seven, employers' associations.

Among activities on the working schedule of CCFP for 1998 were, first of all, activities of organisational and institutional consolidation and management with national and municipal authorities; management of foreign technical assistance; management of legal representation of CCFP, solving infrastructure problems. These items were followed by work guidelines for the direct improvement of occupational training in the region, with tasks such as: initial survey of training needs of the public and private sectors

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regarding basic, general and specific skills; strengthening of the training offer through actions aimed at improving curricula and encouraging competition on the basis of costs and quality of courses, and the installation of sectoral committees to identify specific competencies at the request of sectors.

### **Argentina: local management of technical-vocational training**

As from 1998, the National Institute of Technological Education (INET), of Argentina, has been promoting the development of projects called Local Systems of Educational Offers and Services (SILOSE). These systems are an alternative to overcome the fragmentation and shortcomings in the organisation of existing variants of vocational technical training (FTP). They are shared management schemes in which national and provincial authorities of a given branch come to agreements with local institutions for dispensing training (FTP) services in a zone or district.

The development of a SILOSE implies a process of association and integration of institutions allowing for increases of scale to organise varied, open and flexible training offers and services, capable of progression. A system of this kind requires strategic management, involving different public and private players, to upgrade diagnostic studies and fine-tune the relevance of offers, settle conflicts, optimise resources, keep links with the productive sector and introduce local strategies for teachers' training.

In its setting up process, a SILOSE transfers provincial decisions to local levels and endeavours to become a pluralistic agent of increasing importance in defining the FTP of its own community. In turn, its local scope enables it to design adequate scenarios for the involvement of corporate, trade union and local government sectors, as well as other community players. In terms of the convergence of general education with adults' education and vocational training, the coming together of the various institutions existing in a given district allows for a sort of co-ordination that would not otherwise be possible with the current configuration of educational services in Argentina.

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In Brazil, the long and far reaching experience of **SENAI**, **SENAC** and more recently **SENAR** in the agrarian sector, are examples of national action that finds concrete expression according to the reality of the different federal states. All these Brazilian institutions have a regionalised structure, in which the Regional Departments enjoy a high degree of autonomy *vis-à-vis* National Directorates. This independence is not achieved, as in other cases, by virtue of a central decision to delegate administrative, policy or organisational decisions; it is backed and legitimised by the fact that, in each state, the respective local industrial or commercial chamber is responsible for the management, infrastructure and resources of the Regional Department. This active involvement of local entrepreneurs in institutional management, is reinforced by the fact that this same decentralisation and autonomy facilitates a whole range of co-operation and business schemes within the social, economic and cultural sphere of the State, with local authorities, trade unions or civil society organisations.

92 Also in Brazil, the Training and Professional Development Secretariat (SEFOR) is sponsoring schemes to strengthen local management, in order to promote the involvement of new players in the administration, management and development of training programmes. One of the main lines in this connection is the creation of the **Public Vocational Training Centres (CEPFP)**, through the **States' Secretariats for Employment and Labour Relations (SERT)** of the states of Sao Paulo and Ceará, among others. They are designed as flexible sources of training supply to meet the specific and permanent demands of young and adult workers, employed and unemployed, independent workers and micro enterprises. It is a public, collective and co-operative training offer managed by the local community.

Its principal mission is to co-ordinate the needs and requirements of all local players, and find joint solutions that may be available in the communities themselves, or in outside communities, such as state and federal universities. Training programmes favour a selective appropriation of scientific, technical and technological knowledge and more general information on man and society, that is essential to the education of the working citizen.

Apart from its training programmes, the CEPFP constitutes an information source for workers and employers, fostering greater integration between training actions, enterprises and communities. It also serves to co-ordinate among all education professionals who act on the formal side of training, or at enterprises, in trade unions and governmental organisations.

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Also of great importance is the **National Plan for the Further Training of Workers (PLANFOR)** that SEFOR began to implement in 1996. PLANFOR action follows three broad lines:

- **Conceptual development:** which includes the building and consolidation of a new conceptual and methodological approach to vocational education, guided by the effective demand of the productive sector (gathering together the interests and needs of workers, employers and communities), with a view to raising productivity and the quality of labour, improving workers' employability and the living conditions of the population.

- **Institutional co-ordination:** mobilisation and strengthening of a national vocational training network made up by public and private institutions having infrastructure and experience in the field, such as: federal and state public schools, universities, "S System", non governmental organisations, trade unions, foundations, etc.

- **Support of civil society:** aimed at enlarging the supply of flexible ongoing training through the above network, in order to train and retrain at least 20% of the economically active population every year, in particular those groups that traditionally have less chance of benefiting from training action.

Two mechanisms have gradually been consolidated for the implementation of PLANFOR. Their goals are participation, decentralisation and strengthening of local implementation capacities:

- **State Further Training Plans (PEQ)**, that comprise national and state further training programmes, to meet demands negotiated at Municipal Employment Committees or similar bodies, implemented by the local network of public and private vocational education, contracted by the Labour Secretariat in accordance with the legislation in force.

- **National and Regional "Parcerias" (partnerships)**, implemented through agreements, contracts, co-operation arrangements or protocols signed by CODEFAT, the Ministry of Labour, SEFOR, workers' unions, foundations, universities and other ministries, prioritising conceptual and methodological development and institutional co-ordination.

The **National Training Service (SENA) of Colombia**, through initiatives like the "Vocational Training Programme for Municipal Development", the

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“Programme for the Attention of families and special population groups” and the “Programme for the Attention of the social economy sector”, has endeavoured to contribute to the development of the human resources involved in municipal management; support the promotion and development of associative economic units for the generation of employment, earnings and social promotion; and integrate disadvantaged persons or groups into the development processes of the country, in conditions of equality.

The “Vocational Training Programme for Municipal Development”, addressed at municipal or departmental authorities, technicians of Public Entities and non governmental organisations, and organisations of the active social players in municipalities and departments, includes:

- *Training:* in Planning, Financial Management, Formulation and Management of Projects, Organisational Management and Community Participation in local management, with emphasis on the training of trainers and officials of departmental and municipal administrations.

- *Consulting services:* to departmental or municipal councils, on institutional development.

- *Technical assistance:* on aspects relating to the above mentioned priority areas.

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- *Technological services:* at consulting level, to solve specific problems and criteria of municipal development.

SENA also takes part in the implementation of training and consultancy projects for municipalities.

The “Programme for the Attention of the social economy sector”, addressed at directors of social economy enterprises, affiliates of economic units and technicians belonging to public or private organisations and NGOs, offers:

- *Training:* for the promotion of associative enterprises and second level organisations, for diagnosis and formulation of development plans.

- *Consulting services:* for socio-entrepreneurial diagnosis, formulation and implementation of plans of action and development, and inter-enterprise integration at regional level.

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- *Technical assistance*: in areas pertaining to associative enterprises.
  - *Technological services*: to overcome difficulties in the design, quality control and modification of products and services.

Finally the “Programme for the Attention of families and special population groups”, addressed to persons who work with, or belong to some disadvantaged group, offers services of technical and organisational training to agencies that work with those populations: consultant services on the implementation of vocational training and community organisation methodologies and technologies; technological services focusing on the productive processes of those populations.

Also in Colombia, the experience of the **Paisajoven Corporation** was the result of a bilateral agreement between the Municipality of Medellin and the German Technical Co-operation (GTZ). It operates in the form of a network that includes municipal bodies, ONGs, foundations, universities and a number of agencies specialising in work with young people.

The objective of Paisajoven is to promote co-ordination among organisations, to professionalise its personnel and organise pilot experiences. The approach adopted by the Corporation implies the training of its personnel, reinforcing impact and co-ordination (development of institutional alliances) for the improvement of the services of organisations. To that end training services are implemented, as well as management consulting, tools grants, a diploma on methodology for the design and evaluation of projects, and courses and seminars by specialised institutions or agencies that work with the young.

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The main contribution of Paisajoven in the area of youth employment in Medellin has been a regional model of training for employment. It has identified lack of training as the main cause of structural unemployment, and singled out the local sphere as appropriate for meeting existing training demands. Although these initiatives are costly, they have impact in the medium term.

Training and employment are one of the fourteen lines of action of the Medellin Plan, jointly developed by the State and civil society. Thus, the Municipality of Medellin has promoted a pilot project on “Management model for the training and access to employment of the young”, which aims at inter-institutional co-ordination to improve the training offer, promote more efficient management of resources, and have influence in the medium term on structural unemployment.

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The Programme “**Chile Barrio**”, of the National Training and Employment Service (SENCE) aims at joint action by public organisations that have direct incidence upon the most important poverty indicators. It tries to open up avenues by attracting and co-ordinating financial resources, technical know-how and solidarity support from public programmes and services and the private sector, and making them available to the inhabitants of irregular settlements, so that, with the support of the Programme itself and of local authorities, those inhabitants may join in the collective effort.

96 The objective of this Chilean programme is to help the inhabitants of these precarious settlements in their struggle against poverty. For that purpose, four areas of intervention have been established; community development and insertion into society; occupational and productive enablement; improvement of housing and neighbourhood; and institutional strengthening of programmes aimed at overcoming poverty. Regarding occupational and productive enablement, the specific objective is to provide to the inhabitants of these settlements better opportunities to generate earnings, through occupational training actions for alternative employment and self-employment, and support of initiatives for independent work and micro enterprises. To reach those goals, the Programme has two lines of action: on the one hand, training for work, occupational training and support for accessing the labour market; secondly, financial and technical support and consulting, if necessary, to local productive initiatives that may have possibilities of continuity and expansion.

A somewhat different experience from the above is the project for the Polígono Industrial Don Bosco, in the capital of the Republic of El Salvador. It is a Church response, derived from Salesian pedagogy, to the problems of poverty and marginalisation that exist in some areas of San Salvador, and is aimed at achieving an optimal and dynamic conjunction of the requirements of true work communities and the assumptions of modern enterprises. Based on a strong co-operativist spirit, the training and educational activities of the Polígono adhere to the “preventivist” postulates of the Salesian Educational System. The location chosen for the Polígono –one of the areas with the highest rates of delinquency in San Salvador– is of itself an option for prevention. The assistance it provides for those communities promotes the capacities and productive energy of young people. This programme has proved efficient in the achievement of its goals; through the years it has managed to increase and improve its training and productive offer.



## CONCLUSIONS

1. In Latin America and the Caribbean, training has characteristic and original traits that differentiate it from what can exist in other regions of the world. This is evident both in its history and in the present of its institutional geography, as well as in the concepts and links it has with other spheres of the social and economic life of the countries of the region. There have been original conceptual advances in this field, that have led to the current understanding and practice of training as a labour, technological and educational occurrence. The institutional history of training in the region is unique, as are also unique the ways in which the different countries of the region are facing the challenges of phenomena such as economic globalisation, technological change, or the new forms of organisation of labour and production. The region is today, in respect of training, an authentic nursery of innovative experiences in methodologies, organisational arrangements, financial schemes and strategic alliances among players.

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2. The new systems of labour relations adopted in the region clearly include training as a central subject, a strategic element connected to all the issues that are the object of negotiation: employment, wages, productivity, competitiveness, occupational health, working conditions and environment, social security, etc. Training is also an issue to be negotiated, and figures as such in national or sectoral agreements on employment and productivity, in labour legislation and in collective labour agreements. The various players in these systems also consider it something of their own. Ministries of Labour, through specific units, deal with training, and in many countries it is a priority subject in establishing policies and strategies. Workers' and employers' organisations have increasing participation both in vocational training institutions and in the new training approaches that have emerged in the region, apart from promoting their own training initiatives.

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3. A good part of the more systematic and important efforts of innovation, development and transfer of technology in the region, take place in training spheres. One of the most fruitful examples in that respect are the technological development centres, experiences focalised on different sectors that aim at integrating training services into a perspective of overall attention of the requirements for applied technologies of enterprises and communities. This action is jointly carried out by vocational training institutions, entrepreneurial chambers and technological institutes, and seeks to establish methodological co-ordination between the training and development of human resources, and technological development.

4. These experiences are marked by one of the most important conceptual and methodological innovations of recent times in the field of vocational training: the clients of vocational training are no longer, or exclusively, individual workers or young people who wish to acquire skills. Preferential attention is also given to productive units as a whole, as well as productive and services chains.

5. In educational terms, the regional history of vocational training has many instances of deep commitment and a long history of co-operation with regular education systems. At present, the educational nature of training is enhanced by the new concept of lifelong education. This can be seen in the way vocational training institutions adapt teaching and learning methodologies and strategies, to make their offer more flexible and modular. Examples of co-ordination between vocational training and regular education systems, are secondary technical and technological schools, adult education and new institutional offers of vocational training at higher education level.

6. Regional vocational training has today much higher levels of decentralisation and participation than in the past. This makes it possible to explore the potential of sectoral and local management approaches, which brings rewards not only regarding improved management of financial, human, technical and infrastructure resources but also (and more importantly), in promoting the active incorporation of an ever greater number and diversity of players, with their own views, interests and resources, who come to enrich the field of training with new dimensions: citizenship, community development, strategies for local insertion in a globalised context. The sectoral approach becomes manifest in the training units included in centres for the overall attention of specific economic sectors, such as the textile industry, metal mechanics and automotive industries, hotels and tourism, graphic arts, etc., where links with productive and labour players are closer and contacts

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more frequent, and higher levels of mutual involvement are achieved. Local management of training also implies introducing training strategies into integral community contexts, linking them to local economic and productive development processes, as well as to processes for strengthening the capacities of organisation and citizens' participation of those communities.

7. A description of the organisational reality of vocational training, its links with regular education systems and its financing schemes, admits several types of approximation. This document submits some attempts at establishing a typology of what is happening in this respect in the region of the Americas. Whatever the type of approach, we may conclude that:

i) The scenario of regional vocational training is today more pluralistic and heterogeneous than twenty or thirty years ago.

ii) Within that scenario, several players have gained growing importance. Foremost among them are Ministries of Labour, employers' and workers' organisations.

iii) Organisational arrangements in countries of the region do not fit into a single model, but reflect instead their respective political, economic and social contexts.

iv) Progress made in raising the quality, relevance, integrality and capacity to attain the economic and social goals of training does not directly relate to any particular organisational arrangement; each one has its own strengths and weaknesses.

Este documento  
se terminó de imprimir en el  
Departamento de Publicaciones de Cinterfor  
en Montevideo, abril de 1999