Recent trends in technical education in Latin America

Edited by
Claudia Jacinto

Policies and Strategies for Secondary Education
Recent trends in technical education in Latin America
Recent trends in technical education in Latin America

Edited by Claudia Jacinto
The views and opinions expressed in this book are those of the authors and do not necessarily represent the views of UNESCO or IIEP. The designations employed and the presentation of material throughout this review do not imply the expression of any opinion whatsoever on the part of UNESCO or IIEP concerning the legal status of any country, territory, city or area or its authorities, or concerning its frontiers or boundaries.

The publication costs of this study have been covered through a grant-in-aid offered by UNESCO and by voluntary contributions made by several Member States of UNESCO, the list of which will be found at the end of the volume.
CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of acronyms</td>
<td>7</td>
</tr>
<tr>
<td>List of tables, figures, and boxes</td>
<td>12</td>
</tr>
<tr>
<td>About the authors</td>
<td>14</td>
</tr>
<tr>
<td>Introduction</td>
<td>15</td>
</tr>
<tr>
<td>1. The background of the relations between general secondary and</td>
<td></td>
</tr>
<tr>
<td>technical education and employment in Latin America: eight points</td>
<td></td>
</tr>
<tr>
<td>by Claudia Jacinto</td>
<td>23</td>
</tr>
<tr>
<td>1.1 Between competitiveness and equality:</td>
<td>23</td>
</tr>
<tr>
<td>a region with irregular development</td>
<td></td>
</tr>
<tr>
<td>1.2 Expansion of secondary education:</td>
<td>27</td>
</tr>
<tr>
<td>limited and differentiated</td>
<td></td>
</tr>
<tr>
<td>1.3 Low level of basic competency acquisition</td>
<td>29</td>
</tr>
<tr>
<td>1.4 Access to higher degrees is limited and inequitable</td>
<td>32</td>
</tr>
<tr>
<td>1.5 Good jobs go mainly to the best educated</td>
<td>34</td>
</tr>
<tr>
<td>1.6 Youth: although better educated than their parents,</td>
<td>35</td>
</tr>
<tr>
<td>most affected by the employment crisis</td>
<td></td>
</tr>
<tr>
<td>1.7 Youth employment: unstable and precarious</td>
<td>37</td>
</tr>
<tr>
<td>1.8 Youth: lower levels of job placement for the poor</td>
<td>39</td>
</tr>
<tr>
<td>and less educated</td>
<td></td>
</tr>
<tr>
<td>2. Trends in technical and vocational education and training in Latin</td>
<td></td>
</tr>
<tr>
<td>America</td>
<td></td>
</tr>
<tr>
<td>by Irma Briasco</td>
<td>43</td>
</tr>
<tr>
<td>2.1 Socio-economic and educational context in Latin America</td>
<td>43</td>
</tr>
<tr>
<td>2.2 Secondary technical and vocational education and training in the</td>
<td>46</td>
</tr>
<tr>
<td>selected countries</td>
<td></td>
</tr>
<tr>
<td>2.3 Brief description of TVET in the selected countries</td>
<td>47</td>
</tr>
<tr>
<td>2.4 Trends</td>
<td>56</td>
</tr>
<tr>
<td>2.5 New ways to manage TVET: towards project-based management and</td>
<td>67</td>
</tr>
<tr>
<td>the inclusion of the business relations area</td>
<td></td>
</tr>
<tr>
<td>2.6 Towards the construction of integrated systems of TVET</td>
<td>69</td>
</tr>
<tr>
<td>2.7 Issues pending</td>
<td>71</td>
</tr>
</tbody>
</table>
3. **Preparing for work in general secondary education: recent debates and approaches in Latin America**

   by Claudia Jacinto

3.1 Introduction 77

3.2 Concepts about training for employment in general secondary education in the regional debate: what are ‘employment skills’? 81

3.3 Redefining the ancient dilemma between general and specific academic secondary education 87

3.4 Mechanisms for approaching the world of employment in academic secondary schools 92

3.5 Generation of entrepreneurial competencies 105

3.6 Conclusions 107

4. **Approaches and strategies for the vocational training of unemployed youth in Latin America: has anything changed in recent years?**

   by Claudia Jacinto 113

4.1 Introduction 113

4.2 The complex link to education and employment 114

4.3 The 1990s: co-existence of traditional approaches with new training models 119

4.4 Permanence, persistence, novelty in existing approaches 127

4.5 Some thoughts on possible lines of action 145

5. **The development of systems of competency-based training and certification in Latin America: a general review**

   by Fernando Vargas Zúñiga 149

5.1 The advent of the employment competency approach in the region 149

5.2 Ministries of Employment in competency-based training 160

5.3 Training institutions and the competencies approach 172

5.4 General comments 180

Bibliography 185
LIST OF ACRONYMS

ABRAMAN  Brazilian Maintenance Association
          (Asociación Brasileña de Mantenimiento)
ANEP     National Administration for Public Education
ASE      academic secondary education
BID      International Bank for Development
          (Banco Interamericano de Desarrollo)
BT       technical baccalaureate
          (BachilleroTecnológico1)
CAP      Certificate of Vocational Aptitude
CAPLAB   Service Centre for Job Training and Development
CBE      competency-based education
CBT      competency-based training
CEFET    Federal Centres for Technical Education
CEPAL    Economic Commission for Latin America
          (ComisiónEconómica para America Latina)
CES      Council for Secondary Education
CETI     Technical Industrial Teaching Centre
          (Centro de Enseñanza Técnica Industrial)
CETP     Council for Vocational Technical Education
CIF      International Training Centre
          (Centro Internacional de Formación)
CINTERFOR Inter-American Vocational Training Research and
            Documentation Centre
            (Centro Interamericano de Investigación y Documentación
            sobre Formación Profesional)

1. The baccalaureate is an educational qualification used in Latin America and is equivalent to the high school
diploma or general secondary school certificate.
**List of acronyms**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONALEP</td>
<td>National College for Vocational Training (Colegio Nacional de Educación Profesional)</td>
</tr>
<tr>
<td>CoNET</td>
<td>National Council for Education and Work (Argentina)</td>
</tr>
<tr>
<td>CONOCER</td>
<td>Labour Competency Standardisation and Certification Council (Consejo de Normalización y Certificación de Competencias Laborales)</td>
</tr>
<tr>
<td>CSBE</td>
<td>competency standards-based education</td>
</tr>
<tr>
<td>CSO</td>
<td>civil society organization</td>
</tr>
<tr>
<td>DACUM</td>
<td>Developing a Curriculum</td>
</tr>
<tr>
<td>DGCC</td>
<td>General Directorate of Training Centres (Dirección General de Centros de Capacitación)</td>
</tr>
<tr>
<td>DGCFCTD</td>
<td>Directorate General of Vocational Training Centres</td>
</tr>
<tr>
<td>DGGETA</td>
<td>General Directorate of Technical and Industrial Education (Dirección General de Educación Tecnológica Agropecuaria)</td>
</tr>
<tr>
<td>DGGETI</td>
<td>General Directorate of Agricultural Education (Dirección General de Educación Técnica Industrial)</td>
</tr>
<tr>
<td>DGIT</td>
<td>General Directorate of Technological Institutes (Dirección General de Institutos Tecnológicos)</td>
</tr>
<tr>
<td>EAP</td>
<td>economically active population</td>
</tr>
<tr>
<td>ECLAC</td>
<td>Economic Commission for Latin America and the Caribbean</td>
</tr>
<tr>
<td>EDJA</td>
<td>Education for Young People and Adults</td>
</tr>
<tr>
<td>EUROPEN</td>
<td>European Organization for Packaging and the Environment</td>
</tr>
<tr>
<td>FOMIN</td>
<td>Multilateral Fund for Investments (Fondo Multilateral de Inversiones)</td>
</tr>
<tr>
<td>GDP</td>
<td>gross domestic product</td>
</tr>
<tr>
<td>GT</td>
<td>general training</td>
</tr>
<tr>
<td>GTAW</td>
<td>Gas tungsten arc welding</td>
</tr>
<tr>
<td>GTZ</td>
<td>German Agency for Technical Development</td>
</tr>
<tr>
<td>IBD/IDB</td>
<td>Inter-American Development Bank</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>IBRD</td>
<td>International Bank for Reconstruction and Development (World Bank)</td>
</tr>
<tr>
<td>ICT</td>
<td>information and communication technology</td>
</tr>
<tr>
<td>IFP</td>
<td>Vocational Training Institutes (Instituciones de Formación Profesional)</td>
</tr>
<tr>
<td>IIEP</td>
<td>International Institute for Educational Planning</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labour Organisation</td>
</tr>
<tr>
<td>ILOITC</td>
<td>International Training Centre of the International Labour Organisation (Turin)</td>
</tr>
<tr>
<td>INA</td>
<td>National Training Institute (Instituto Nacional de Aprendizaje)</td>
</tr>
<tr>
<td>INATEC</td>
<td>National Institute of Technology</td>
</tr>
<tr>
<td>INCE</td>
<td>National Institute for Education Cooperation (Instituto Nacional de Cooperación Educativa)</td>
</tr>
<tr>
<td>INET</td>
<td>National Institute of Technological Education</td>
</tr>
<tr>
<td>INTECAP</td>
<td>Technical Institute for Training and Productivity (Instituto Técnico de Capacitación y Productividad), Guatemala</td>
</tr>
<tr>
<td>IPN</td>
<td>National Polytechnic Institute (Instituto Politécnico Nacional)</td>
</tr>
<tr>
<td>LDB</td>
<td>Law of Guidelines and Bases for Education</td>
</tr>
<tr>
<td>MEC</td>
<td>Ministry of Education and Culture</td>
</tr>
<tr>
<td>MEC</td>
<td>Ministry of Education and Science (Ministério da Educação), Brazil</td>
</tr>
<tr>
<td>MERCOSUR</td>
<td>Southern Common Market</td>
</tr>
<tr>
<td>MIF</td>
<td>Multilateral Investment Fund</td>
</tr>
<tr>
<td>MTEySS</td>
<td>Ministry of Labour, Employment and Social Security (Ministerio del Trabajo, Empleo y Seguridad Social), Argentina</td>
</tr>
<tr>
<td>NGO</td>
<td>non-governmental organization</td>
</tr>
<tr>
<td>NORTE</td>
<td>Technical Competency Standard (Norma Técnica de Competencia)</td>
</tr>
</tbody>
</table>
List of acronyms

**NTCL**  Technical Standards for Labour Competencies (Normas Técnicas de Competencia Laboral)
**OEI**  Organization of Ibero-American States
**OREALC**  UNESCO Regional Bureau of Education for Latin America and the Caribbean
**OTEC**  Technical Training Agency (Organismos Técnicos de Capacitación)
**PISA**  Programme for International Student Assessment
**PLANFOR**  National Plan of Vocational Training
**PNQ**  National Qualification Plan
**PREAL**  Education Reform Programme in Latin America and the Caribbean
**PREJAL**  Promotion of Youth Employment in Latin America
**PROEP**  Project for the Expansion of Vocational Education
**PROFORHCOM**  Competencies-based Human Resource Training Programme
**SCID**  Systematic Curriculum Instructional Development
**SEB**  Secretariat for Primary Education
**SEBRAE**  Brazilian Service of Support for Micro and Small Enterprises
**SEFOR**  Secretariat for Vocational Training
**SENA**  National Training Service (Servicio Nacional de Aprendizaje)
**SENAC**  National Commercial Training Service (Servicio Nacional de Aprendizaje Comercial)
**SENAI**  National Industrial Training Service (Servicio Nacional de Aprendizaje Industrial)
**SENAR**  National Rural Training Service
**SENATI**  National Service for Industrial Labour Training (Servicio Nacional de Adiestramiento en Trabajo Industrial)
**SENCE**  National Service for Training and Employment (Servicio Nacional de Capacitación y Empleo)
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEP</td>
<td>Secretariat for Public Education</td>
</tr>
<tr>
<td>SETEC</td>
<td>Secretariat for Vocational and Technological Education</td>
</tr>
<tr>
<td>SITEAL</td>
<td>Information System on Educational Trends in Latin America</td>
</tr>
<tr>
<td>SMAW</td>
<td>shielded metal arc welding</td>
</tr>
<tr>
<td>SNET</td>
<td>National Institute of Technological Education</td>
</tr>
<tr>
<td>TE</td>
<td>technical education</td>
</tr>
<tr>
<td>TICs/ICTs</td>
<td>information and communication technologies (tecnologías de la información y la comunicación)</td>
</tr>
<tr>
<td>TSE</td>
<td>technical secondary education</td>
</tr>
<tr>
<td>TVC</td>
<td>tele-secondary schools linked to the community</td>
</tr>
<tr>
<td>TVET</td>
<td>technical and vocational education and training</td>
</tr>
<tr>
<td>UECyTM</td>
<td>Marine Science and Technology Education Unit (Unidad de Educación de Ciencia y Tecnología del Mar)</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>VANI</td>
<td>validation of non-formal and informal learning</td>
</tr>
<tr>
<td>VTT</td>
<td>vocational and technical training</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1.3 Percentage of homes with adolescents with Internet access by socio-economic status of the household, geographical area and total by country. Latin America, circa 2006 30
Table 4.1 Types of institutions participating in programmes 132
Table 4.2 Components of training 135
Table 4.3 Coordination between formal and alternative education 138
Table 4.4 Type of support in placement 140
Table 4.5 Public objective of the programmes 145
Table 5.1 New characteristics in the organization of work and its effect on competencies 152
Table 5.2 The various methodological and conceptual alternatives applied in the region for different stages of the competency-based model 154
Table 5.3 Progress in the development of competency standards 164
Table 5.4 CONOCER Most widely certified competencies 170

LIST OF FIGURES

Figure 1.1 Extent of poverty up to 2006: selected countries in Latin America 25
Figure 1.2 Net secondary schooling rates according to the educational level of the adults of the household 28
Figure 1.3 Differences in schooling rates by educational level of adults in the household 31
Figure 1.4 Percentage of students by qualification level in reading 32
Figure 1.5  Percentages of urban youth (18–29) who complete secondary education; who go on to enter higher education and who subsequently drop out of higher education (2000) 33

Figure 1.6  Unemployment rate by age group and country of urban EAP over age 14 (2000–2004) 36

Figure 1.7  Percentage of urban employed over age 14 in the informal sector, by age and country (2000–2004) 38

LIST OF BOXES

Box 1. General occupational competencies – methodological path for inclusion in the secondary education curriculum: the case of Bogotá 89

Box 2. The Chilecalifica Careers and Labour Guidance Programme 99

Box 3. The Fe y Alegría experience 104

Box 4. Levels of studies within the Chilecalifica Programme 137

Box 5. Entra 21 139

Box 6. ProJovem 140

Box 7. Art 45. Law of Bases and Guidelines for Education (Brazil) 165

Box 8. National Service for Training and Employment (SENCE) 167

Box 9. CONOCER: Standardization Committees 172

Box 10. Concept of occupational competency, SENAI 174

Box 11. Definition of labour competence in INTECAP 178

Box 12. Types of competencies recognized by INTECAP 179
ABOUT THE AUTHORS

Irma Concepción Briasco is an Argentinian specialist in planning and management of social policies and holds a degree in Education Sciences from the Universidad de Buenos Aires. She currently serves as an expert on technical and vocational education for the Organización de Estados Iberoamericanos (OEI). She is also a researcher and professor at the Universidad Pedagógica of the province of Buenos Aires.

Claudia Jacinto is an Argentinian sociologist and researcher and the Coordinator for the (IIIEP–UNESCO) RedEtis Network on education, work, and social inclusion in Latin America. Her main areas of expertise are youth employment policies, secondary education and preparation for the world of work, and technical and vocational training. She also serves as coordinator of the PREJET Programme (on youth, education, and work) at the Instituto de Desarrollo Económico y Social (IDES), Buenos Aires. She received her doctorate in Sociology (with a concentration in Latin America) from the Université Sorbonne Nouvelle Paris 3, France.

Fernando Vargas Zuñiga, a Colombian specialist on vocational training, is currently a consultant with ILO/Cinterfor (the Inter-American Centre for Knowledge Development in Vocational Training), specializing in competency-based training, recognition of prior learning, management of vocational training institutions, and quality assurance. He holds a degree in Business Administration from the Universidad Externado de Colombia, Bogotá. His experience in vocational training was gained mainly during his career at the National Training Service (SENA) in Colombia.
Enormous socio-economic and cultural transformations, as well as the expansion of access to secondary school, have contributed, over the past two decades, to the revision of this level of education, taking into consideration its multiple functions, among them training for work. Latin America, which has almost achieved universal primary education and extended obligatory education to the lower secondary level (including in some countries, the upper secondary level), is encountering considerable problems, both in keeping youth in schooling up to the end of the level, as well as providing the opportunity for quality education.

Leaving aside major differences between countries, the importance to young people of completing their secondary education in order to obtain a job is evident. As examined in this book, almost half of young people in Latin America do not finish secondary education, leading to problems when they try to find quality employment. The other half enter the labour market and develop their working careers on the basis of this diploma, although subsequently they may take up other forms of continuing training. In addition, many young people are only able to continue with higher education if they are employed at the same time. The conditions of such employment will be much improved if they have systematically acquired ‘job skills’ during their secondary school.

Much of the available information indicates that the number of years spent in school and access to good basic and secondary education are key factors in finding employment and obtaining decent jobs. An estimated 12 years in school are needed to find a way out of poverty. At the same time, paradoxically, secondary education qualifications have, at least in some countries, decreased in value in the labour market while remaining necessary, but not sufficient, for obtaining a good job. In effect, their value is affected not only by expansion in the education system itself, but also by the growth of unemployment, informal employment and the instability of employment
in the region. A secondary education qualification does not have the same value for everyone: socio-economic background, the level of education in the home, and the quality of the schools attended are some of the factors that determine where secondary school graduates find employment.

Given this situation, there is broad agreement in the region on the role of secondary education in the development of general and transversal competencies and knowledge. These are now considered basic requirements for finding work in a varied and uncertain labour market characterized by technological innovation, the opening of trade, regional integration processes, and so on.

Given the uncertainty of the labour market and concern with equal opportunities, it was decided in the 1990s that reform efforts should focus on providing a broad general education of quality, at least up to the completion of lower secondary education. In line with these approaches, many secondary education policies have been, and are, directed towards improving quality and retention as well as providing opportunities for those students excluded from formal schooling at an early age (Jacinto and Terigi, 2007).

At the same time, processes were introduced to reform technical education. These processes tended to focus on general content, and the first steps were taken towards linking technical education to approaches based on the development of competencies.

In addition, young people (usually from poorer sectors) who had not completed secondary education became the focus of broad vocational training programmes created in the 1990s. These were directed primarily at unemployed youth as part of active employment and/or social policies aimed at overcoming poverty. Although in some cases the job placement results – although limited – were of interest, one of the major weaknesses of these initiatives was that they were not generally linked to secondary education and/or regular vocational training and did not permit young people to return to education.
At the beginning of the 21st century, discontent with results, the emergence of new challenges and lessons learned led to a modification of these trends. This book takes a close look at these new approaches and trends.

To provide some background information, Chapter 2 examines the complex tasks that face Latin America – with its significant inequities and a diverse labour market – in the development of general and technical secondary education and vocational training, while also seeking increased levels of competitiveness and equality. The difficulties in providing relevant, quality education and in retaining students at the secondary level, limited expansion at higher education, and the problems faced by young people in finding employment have defined a situation where the preparation of youth for employment has been a key factor for development. This situation has also led to the design of lifelong training systems.

One subject that is reiterated throughout the book is the emergence of increasingly permeable barriers between academic education and technical and vocational training, between theory and practice in a world where the generation of knowledge calls for the integration of skills and continuous adaptation to change. “An egalitarian concept of education should aim to change the stratification between theoretical and practical knowledge, abolishing divisions that are reflected in the school system and in the organization of the curriculum” (Camilioni, 2006).

In Chapter 5, Vargas observes: “More and more, the idea prevails of opening a lifelong line of education that minimizes the difference between types of education and recognizes that a varied range of competencies is acquired, but always designed more to be an intellectual asset to the worker.” This important item on the Latin American education agenda is the source of many reformulations and debates, but also of specific measures in the education policies analysed throughout this book. Thus, it highlights that recent reforms encourage greater coordination throughout secondary education, including academic, general, or common education systems, with training for employment.
Introduction

Although in most countries of the region technical education is not the final stage but rather prepares the student for entrance to higher education, the chapter on technical education highlights new initiatives aimed at coordinating it with a system of ongoing training and the certification of competencies.

Is technical secondary education being called upon to resolve the dissociation between academic education and training for employment? Based on a study of certain experiences, the introduction of competency-based training is seen as a way of fostering links with the demands and requirements of local production economies. It could also facilitate the sub-regional processes of integration. Nevertheless, although these concepts are present in prevailing transformation processes in the countries of the region, in many cases the Ministries of Education and Employment develop parallel policies, and coordination remains at the level of discussion. In those countries that are moving towards a competency-based curriculum, efforts have, until now, focused on curriculum design and new strategies for institutional transformation. An appropriate didactic and pedagogical strategy and of educational materials and the strengthening of teaching practices that serve to develop such competencies are still to be developed.

Although the competency-based approach is still questioned in technical education and there are major institutional challenges to overcome before it can be put into practice, in vocational training (as described in Chapter 2) this approach is widespread around the region, to such an extent that all the institutions that specialize in this area currently apply a competency-based approach at different levels and in various ways. The author maintains that it is not only vocational training that has undergone this change of paradigm: in some countries primary education and higher education have also experienced the change. One of the factors most evident in a competency-based view of education is the application in Latin America of international standardized tests such as PISA (Programme for Indicators of Student Achievement).

The application of competency-based training has inevitably filtered down into the initial stages of the process for the preparation of vocational
training, but the horizons for the recognition and certification of prior learning are not so well defined. Few countries are advancing in the definition of the processes for certifying competencies, following the pioneer experiences of INA (National Training Institute) in Costa Rica and SENA (National Training Service) in Colombia.

To sum up, this is a process of advances and setbacks, where some agreements have been reached. However, given the nature of these agreements, they are more likely to succeed in vocational training. In technical education they may be the source of innovation, but on the basis of recognizing other rationales, social functions, and requirements that affect them. The recognition of requirements is even more relevant to general secondary education.

This is undoubtedly of relevance to all training processes. After examining vocational training, the author believes that the most significant changes have occurred in pedagogical strategies, teaching methods, and the way in which knowledge is transferred to the participants. New mechanisms are being tried, ranging from the renewed appearance of training using projects or problem-solving to the widespread adoption of new information and communication technologies in pedagogical spheres, and teamwork – much praised in employment. The classroom or workshops are no longer the only places for learning. Learning processes that take place in different environments and at different rates are now recognized.

How many and how can these pedagogical innovations in vocational training be transferred to technical secondary education? Furthermore, what can be learnt from these innovations for general secondary education, given the problems faced in the integration of knowledge and motivation of young people? These are some of the questions asked.

The chapter on general secondary education and preparation for employment examines recent reformulations. At least two questions have become the subject of proposals and new approaches in some countries: could a certain ‘vocationalization’ of lower secondary education contribute to equality? How far should upper secondary education prepare people for
Introduction

employment, beyond the general and transversal competencies with which everyone is in agreement?

In some countries, the development of general and/or specific labour competencies in academic secondary education has gone beyond the institutional initiative stage and has been implemented in secondary education policies. Reformulation appears to be linked to the fact that not only are ‘major’ technological transformations – such as globalization, and the opening of markets – emphasized, but also the complexities and tensions of diverse and segmented labour markets, such as the Latin American, as well as contradictory demands on education. This recognition fosters approaches that aim to reduce the dichotomy between general and specific knowledge, proposing the integration of knowledge and the minimization of the isolation of schools. Within this framework, new, broader concepts on the introduction of employment skills in schools are organized along at least two major lines: (a) giving ‘employment’ and its ethical, political, social, legal interests as an object of knowledge and the development of competencies a firm place within the school curriculum; and (b) providing mechanisms and options that facilitate the development of general vocational and specific skills, including internships, entrepreneurship, educational-vocational guidance, and links to vocational training.

Lastly, in a similar attempt to strengthen the links between the different types of education and vocational training directed at young people, Chapter 4 on new approaches directed at the vocational training of unemployed youth who have dropped out from secondary education highlights recent links to the institutional programme of regular vocational training with alternative proposals for formal education aimed at young people and adults. In effect, some programmes currently recommend links to basic and secondary education services to encourage young people (and adults) to complete this level of education and obtain a qualification through flexible strategies. Programmes also recommend support for youth after school to provide access and permanence in employment. But there is still a long way to go before the
differences in the quality and relevance of these programmes are eliminated, and their coverage is broadened, without duplication or disjointedness.

The various chapters in this book arrive at a common conclusion. The organization of education and training circuits that open paths to employment for youth, that are both relevant and pertinent while also responding to the demands of the labour market and to local and national development, is one of the greatest challenges facing vocational training and educational transformation in the region. To design training circuits that link formal, non-formal, and informal education in a lifelong learning system is not only a question of efficiency and efficacy. It also aims to improve opportunities for all and to search for paths to inclusive development.
1. THE BACKGROUND OF THE RELATIONS BETWEEN GENERAL SECONDARY AND TECHNICAL EDUCATION AND EMPLOYMENT IN LATIN AMERICA: EIGHT POINTS

Claudia Jacinto

This chapter describes some of the pressures in the setting in which general and technical secondary education policies must be analysed with respect to preparation for working in the region. We take a brief look not only at the social panorama and the labour markets, but also at the main trends in the relation between secondary education and the world of work, and the difficulties and heterogeneities in the employment situation of young people in the region.

1.1 Between competitiveness and equality: a region with irregular development

Latin America has one of the lowest levels of social integration in the world. Here differences in educational and employment opportunities and the inequitable distribution of income are structural phenomena. In addition to the exclusion of indigenous communities and of those of African descent throughout history, the appearance of large areas of poverty in the cities resulting from rural-urban migration has added to the problem for decades. The unequal distribution of income and wealth is reflected in the differences in educational and employment opportunities. Added to this backdrop of exclusions is a new reality, marked by globalization and the opening of economic processes, which have reinforced social segmentation.²

In recent decades, socio-economic conditions and those of the labour market have deteriorated, the most visible signs being the increase in

---

² The simple average of the Gini coefficients of 13 countries for the period 2003–2005 produced a value of 0.523, with significant differences between countries and within countries. According to this index, the countries with the greatest inequalities are Brazil, Colombia, Honduras, and Bolivia, where the index is more than 0.580. At the other end of the scale, only Uruguay has a low Gini index. (CEPAL, 2006)
unemployment in several countries and the reduction in the quality of employment. Few new jobs are created, and work is concentrated in the informal sector. Real salaries are low, and formal employment has been affected by increased labour flexibility. Significant polarization is observed between countries and within countries. An increasing mainly informal sector tending to employ the poorest sectors of the population is combined with industrial and service sectors integrated into the global market, with diverse technological standards and process types. Although recent decades have seen some technological and organizational modernization in the most advanced sectors, smaller and micro companies have remained the same and artisanal methods of production prevail.

Between 1990 and 2004, inadequate and erratic economic growth led to rising unemployment, the expansion of low-quality employment, and emigration (CEPAL, 2005b). The percentage of the informal sector in urban employment rose from 42.8% in 1990 to 46.7% in 2003. At the same time, the gap between average incomes from employment in the formal sector and in the informal sector increased from 59% to 72% (CEPAL, 2005b). While salaried employment varied according to the annual levels of economic growth, a certain duality is clearly visible in self-employment. One section corresponds to activities undertaken for survival in precarious conditions at low incomes, while the other, smaller section, reflects more efficient production units, in many cases small businesses resulting from the outsourcing of certain processes in larger companies.

In the countries of the Southern Cone, the labour force is largely concentrated in the service sector, amounting to almost 70%, while occupation in the primary sector represents 10–12%. In other countries, on the other hand, and particularly in Central America, the primary sector ranges from 26% in Costa Rica to more than 30% in countries such as El Salvador, while the secondary sector ranges between 20% and 35%, depending on the country (ILO, 2006). During the period from 1990 to 2004, average labour productivity increased only in the primary sector. This was principally due to the modernization of business agriculture, based on the intensive use of capital, the expulsion of labour from some sectors of the rural economy, and the expansion in mining (CEPAL, 2008).
After 2004, macroeconomic conditions improved, the regional unemployment rate fell to 8.0% in 2007, and an increase in productivity was recorded. In spite of these improvements, the employment situation and the quality of jobs remain largely inadequate. The percentage employed and registered in the social security system fell from 63.3% in 1990 to 55.5% in 2002; it increased slightly in the following years, with 56.7% of the employed included in the system in 2005. This reduction in levels of protection also affected salaried workers, where the percentage of contributors fell from 72.4% in 1990 to 68.2% in 2005. Moreover, a significant proportion of salaried workers had no contracts or only short-term temporary contracts, a situation to which the increase in subcontracted personnel may have contributed (CEPAL, 2008).

Although poverty decreased slightly in recent years, it still reaches significant proportions among the region’s population, with major differences between and within countries (Figure 1.1).

Figure 1.1  Extent of poverty up to 2006: selected countries in Latin America

![Population below the poverty line](image)

Source: CEPAL, on special tabulations of household surveys in the respective countries.
Within this framework, structural inequality is hard to resolve. In the region, groups whose consumption and codes are those of developed societies live alongside others in deprived conditions, where basic needs are not met. Access to communications and higher levels of education has tended to homogenize consumer ambitions, but there remains a huge gap between expectations and reality. Drug production and drug trafficking play a major role in the economy of the region, and some countries have a high concentration of illicit cultivation. In spite of crop eradication campaigns, the production of illicit drugs continues to expand, largely because of the difficulties encountered in counteracting the high profits farmers can make if they replace other agricultural products with cocaine crops (Arriaga and Hoppenhayn, 2000). This increase, along with the socio-economic crisis and the inequalities, are at the root of growing violence, which particularly affects young people.

Migration in search of better opportunities has become a standard form of survival for many poor families, particularly in some countries. Remittances constitute a major part of the GDP in some countries, especially in Central America and Mexico. In 2006, remittances amounted to some US$62,300 million, 14% more than in 2005, making the region the economic area receiving the largest amount in remittances in the world. For the fourth consecutive year, this quantity has exceeded the combined funds received from direct investment and official aid directed at the region. Approximately 75% of remittances are sent from the United States, and almost 15% of the total comes from Western Europe, especially from Spain, Italy, Portugal, and the United Kingdom. Other significant flows go from Japan to Brazil and Peru, and from Canada to Haiti, while the remainder are internal (IBD, 2007). The economic and social importance of migration demonstrates its significant role in the life strategies of poor families, particularly in some countries in the region, and in the destiny of many young people, posing further challenges to education and training for employment.

To sum up, the region faces a series of major challenges with respect to socio-economic development, globalization, mobility, governability, and
inequality, which at the same time are reflected in and affect educational and social opportunities. In addition, the huge heterogeneities between and within countries lead to the establishment of clearly defined limits to any trends and general challenges that may be detected. Nevertheless, in recent years some events have opened a window of opportunity for youth employment: the reduction in demographic pressure, the rise in the international price of commodities in the region, resulting in significant growth, and increased access to communication and information technologies (although with limitations, as will be seen).

1.2 Expansion of secondary education: limited and differentiated

What can education achieve in this context? Without doubt, an even distribution of knowledge with significant improvements in quality would raise the average training levels of the population, providing a basic stepping stone and better individual opportunities in society and in complex employment markets.

Nevertheless, the education available faces many limitations in the region. Secondary education attendance is inadequate, vocational training systems have significant coverage only in some countries, and alternative training schemes for those students who do not complete secondary education are scarce, although developing.

For some time, studies of education in Latin America have suggested that most problems are found in secondary education, even though this is the level with the lowest number of solutions and responses (Tedesco, 2001). Expansion in secondary education must deal simultaneously with the educational debts of the past, principally evident in partial coverage, which does not reach all adolescents, and new challenges brought about by the demand for changes to the organization of work, culture, and civic activity (Tedesco and Lopez, 2004).

Critical problems in secondary education include high repetition and drop-out rates. If we look at the situation of young people aged 20 to 29, the regional average shows that only 34.8% of 20- to 24-year-olds and 32.6% of
Recent trends in technical education in Latin America

25- to 29-year-olds have completed secondary education (CEPAL, 2005b). Even in some countries with relatively high rates of schooling, completion levels rarely exceed 50%. This is of considerable concern: schools are carrying out the selection and exclusion that used to be done before entrance.

Expansion is also unequal: schooling rates vary between the higher and lower income brackets, with gaps of around 20%, and in some cases of more than 30%. Figure 1.2 shows the differences in schooling rates by educational level attained by the adults of the household. There is broad inter-regional diversity in all countries, and young people living in large metropolitan areas are the most likely to finish secondary education (SITEAL, 2005b). For example, in Chile the proportion of young people in urban areas who successfully complete more than 10 years of schooling is 1.6 times greater than in rural areas, and in Guatemala it is almost 9 times higher (OREALC, 2003).

Figure 1.2  Net secondary schooling rates according to the educational level of the adults of the household

![Figure 1.2](image-url)

Thus, most of the students who drop out from secondary education are young people from poorer and rural sectors. There are many reasons for this. A study based on household surveys indicates (CEPAL, 2002): (a) economic reasons, including insufficient resources in the household to meet the costs of attending school, and dropping out to work or to look for employment; (b) problems relating to the lack of schools; (c) family problems: household chores, pregnancy, maternity; (d) lack of interest, including parents’ lack of interest; (e) problems at school: low performance levels and problems of discipline.3

As can be seen throughout this book, there are certain initiatives in the region towards setting up a lifelong system of education and training. According to the Delors Report (1996), such initiatives include alternative flexible programmes for the completion of secondary education aimed at young people and adults. In recent years these have expanded to some extent (Chapter 3), showing the increased demand for such an initiative.

1.3 Low level of basic competency acquisition

In Latin America, the regional average length of education is 9 years for males and 10.2 years for females – a considerably better general situation than in Africa, both in the number of years of study and the equality of opportunities for both genders. Nevertheless, the distance from countries in the OECD is significant. Moreover, countries such as Brazil and Guatemala have averages far below those in the other countries, barely reaching an average of 7.7 years (di Gropello, 2006).

Another possible way to view the acquisition of basic competencies is by looking at the extent of Internet access in the region. On average, according to data for 2006, only 11% of households with school-age children have

---

3. In seven of the eight countries studied – that is, with the exception of the Dominican Republic – the majority of adolescent males dropped out for economic reasons. Lack of interest in studies is often mentioned (more by males than by females) as the principal reason for dropping out, reaching levels of 10–25%. This reason is given more frequently than are problems with performance at school, although undoubtedly the two factors are closely linked (CEPAL, 2002).
access to Internet, compared to 44% in Europe and 63% in the United States (Sunkel, 2006). However, there are huge gaps according to level of income, as seen in Table 1.3.

Table 1.3 Percentage of homes with adolescents with Internet access by socio-economic status of the household, geographical area and total by country. Latin America, circa 2006

<table>
<thead>
<tr>
<th>Residencial sector</th>
<th>Sex</th>
<th>Urban</th>
<th>Rural</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not use a computer</td>
<td></td>
<td>59.3</td>
<td>75.4</td>
<td>28.7</td>
<td>32.1</td>
</tr>
<tr>
<td></td>
<td>Brazil</td>
<td>64.3</td>
<td>87.8</td>
<td>31.1</td>
<td>36.3</td>
</tr>
<tr>
<td></td>
<td>Chile</td>
<td>58.1</td>
<td>77.1</td>
<td>27.9</td>
<td>33.1</td>
</tr>
<tr>
<td></td>
<td>Bolivia</td>
<td>61.6</td>
<td>84.8</td>
<td>31.1</td>
<td>38.7</td>
</tr>
<tr>
<td></td>
<td>Paraguay</td>
<td>72.8</td>
<td>92.7</td>
<td>39.6</td>
<td>40.5</td>
</tr>
<tr>
<td></td>
<td>Uruguay</td>
<td>61.6</td>
<td>86.8</td>
<td>28.9</td>
<td>34.4</td>
</tr>
<tr>
<td>Uses a computer but not Internet</td>
<td></td>
<td>5</td>
<td>7.6</td>
<td>2.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Argentina</td>
<td>2.5</td>
<td>0.9</td>
<td>1.3</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>4.6</td>
<td>5.7</td>
<td>2.3</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td>7.6</td>
<td>7.4</td>
<td>4</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>Paraguay</td>
<td>6.8</td>
<td>3.3</td>
<td>2.4</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>Uruguay</td>
<td>5.2</td>
<td>2.5</td>
<td>2.4</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>Uses both computer and Internet</td>
<td></td>
<td>35.7</td>
<td>16.9</td>
<td>16.5</td>
<td>17.4</td>
</tr>
<tr>
<td>Argentina</td>
<td>33.2</td>
<td>11.3</td>
<td>14.8</td>
<td>15.5</td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>37.3</td>
<td>17.2</td>
<td>18.2</td>
<td>16.2</td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td>30.8</td>
<td>7.7</td>
<td>13</td>
<td>9.5</td>
<td></td>
</tr>
<tr>
<td>Paraguay</td>
<td>20.4</td>
<td>4</td>
<td>8.1</td>
<td>6.4</td>
<td></td>
</tr>
<tr>
<td>Uruguay</td>
<td>33.2</td>
<td>10.9</td>
<td>15.8</td>
<td>16.1</td>
<td></td>
</tr>
</tbody>
</table>


In addition, little information is available about educational achievement in terms of basic competencies in the region, as can be seen from the results of the countries taking part in the Programme for International Student Assessment (PISA). As Figures 1.3 and 1.4 show, in both language and
mathematics the performance of 15-year-olds enrolled in secondary education is markedly lower than in the OECD as a whole. These figures refer only to students who have managed to ‘survive’ in the education system until age 15, thus exposing the critical situation of those students who have never even reached this stage. In addition, the results also vary among students from households with different levels of income, giving a segmented perspective of the education available in the region (Braslavsky, 2001; OREALC, 2007; World Bank, 2005).

**Figure 1.3 Differences in schooling rates by educational level of adults in the household**

Thus, the expansion of secondary-level education is accompanied by two areas of significant concern, resulting in limited access to basic competencies and skills, a high drop-out rate, and a low quality of education. Both factors are unevenly distributed throughout the population, according to the income and educational level of adults of the households, which, in turn, results in other inequalities in the access to goods and services.
Figure 1.4  Percentage of students by qualification level in reading


1.4 Access to higher degrees is limited and inequitable

The percentage of young people aged between 25 and 29 who have completed at least five years of higher education increased between 1990 and 2004 from 4.8% to 7.4% (UNESCO, 2006). Thus, access to higher education is limited, not only due to the low numbers completing secondary education, but also due to the high drop-out rates in higher education.

Figure 1.5 shows that there are also significant differences between countries in the numbers completing secondary education and enrolling in higher education. The higher the percentage of those completing secondary education, the lower the percentage who enrol in tertiary or higher education. Moreover, in all the countries in the study except Uruguay, the majority of those entering higher education come from 40% of the households with the highest per capita family incomes. The same trends with respect to the difference in opportunities are observed in graduates: the drop-out rate is higher among entrants from a lower socio-economic background (SITEAL, 2005b).
Figure 1.5  Percentages of urban youth (18–29) who complete secondary education; who go on to enter higher education and who subsequently drop out of higher education (2000)

As a result of the drop-out rates in secondary and post-secondary education, the situation in the region reveals that, at best, secondary education – often of poor quality – is, and is probably likely to remain in the near future, the highest level to which the majority of young people in the region have access and which they have an opportunity to complete. This must be considered when examining policies for general and technical secondary education and training for work in the region.

Source: SITEAL, 2005
1.5 **Good jobs go mainly to the best educated**

While many young people are forced to enter the labour market without having completed secondary education, this has become a basic educational requirement for obtaining a good job. At the same time, qualifications in the region are losing their value, particularly in some countries, as the average educational level of young people goes up (Filmus, 2001).

Opportunities for entering the most competitive sectors of the economy are more and more often reserved for those people with the highest levels of education. In the last decade, those among the working population who had only achieved a primary education were the most likely to be displaced from the formal sector and forced to seek alternatives in the informal sector of the economy. Unemployment rates also rose among those who only completed secondary education, although not to the same extent as among those who did not finish primary education. The least affected by the restrictions of the labour market were those who had completed post-secondary education (SITEAL, 2006).

In recent years, the highest qualification level has still been useful for maintaining employment opportunities in the formal sector and has served to protect against unemployment, though differences exist between countries. In the 1990s, in Argentina, Chile, and Uruguay among the EAP (economically active population) those who had only completed secondary education were the most affected by the rise of unemployment rates and also missed opportunities for employment in the formal sector. A post-secondary qualification was the only level of education that offered protection against unemployment and being relegated to informal employment. In these countries, a secondary level qualification was necessary but not sufficient to obtain quality employment, as the deterioration in the employment market coincided with the improvement in the level of education. In countries such as Brazil and Mexico, both higher levels of unemployment and higher levels of informal employment were recorded among people with lower levels of education. In others, such as Bolivia, El Salvador, Guatemala, Honduras,
Nicaragua, and Paraguay, the informal sector has expanded in the last decade at the cost of the formal sector, but without increasing the unemployment rate. Therefore, the majority of new jobs available are in the informal sector, and are characterized as lower quality jobs. Although it was usually the less educated who moved from the formal sector to the informal sector, sometimes those people who had completed secondary education and post-secondary education were also affected. However, informal employment rates decrease as the level of education increases (SITEAL, 2006).

The relationship between incomes and years of schooling shows that each additional year of education among the active population aged over 25 is, on average, reflected in 11% of earnings (di Gropello, 2006). However, the gain in earnings provided by education to low-income households is lower than that in households with higher incomes. One reason for this has been linked to the low quality of education received by the poor. Thus, the study maintains that uncertain earnings and the low quality of schools may explain both the lower level of demand for education from young people with limited resources and their low performance levels.

1.6 Youth: although better educated than their parents, most affected by the employment crisis

Both demographic trends and the improvement in schooling, almost universal at primary level and with high rates at secondary level, although varying substantially between countries, led to predictions that the relative position of young people in the employment market would improve in the 1990s. A number of factors have, however, contributed to preventing this.

Young people have been particularly affected by the employment crisis. Since the early 1990s, the unemployment rates among young people, in all countries, have been significantly higher than those for the economically active population as a whole, in addition to the high levels of under-employment. Erratic economic growth and increased unemployment have affected young people in particular, as this group includes those seeking employment for the
first time and has a higher turnover. Unemployment rates for young people are at least double those for the whole of the economically active population. Towards the end of the 1990s, while the general urban unemployment rate was 10.2%, the unemployment rate for young people aged between 15 and 24 reached an average of 19.5% (Weller, 2003). Figure 1.6 represents this situation.

**Figure 1.6 Unemployment rate by age group and country of urban EAP over age 14 (2000–2004)**

Nevertheless, in those countries characterized by a large informal sector, unemployment has been far lower than in those countries with higher historical levels of formal employment, such as those in the Southern Cone. Here, although the unemployment rates among young people have been usually higher than among adults, youth unemployment was not such a significant problem.
A secondary education qualification offers less and less protection against unemployment for young people, particularly in those countries with larger numbers of students entering and completing secondary education. Nevertheless, even in those countries young secondary school graduates still have a better opportunity of finding stable employment with higher incomes than do their peers with lower qualifications (SITEAL, 2006).

Unfortunately, no figures are available for the region to permit the comparison of performance in the employment market of graduates with different secondary-level qualifications, in particular between those with general secondary qualifications and those with technical secondary qualifications. Certain studies of graduates (ANEP, 2004; Filmus, 2001; Peirano and Sevilla, 2003) suggest that, at least in the graduate’s first years, technical graduates usually have better employment opportunities, especially in the context of recent economic reactivation.4

1.7 Youth employment: unstable and precarious

Perhaps the most marked characteristic in young people’s current relation with the employment market is the precarious nature of their employment. Their careers tend to combine periods of unemployment, under-employment, inactivity, temporary contracts, and self-employment, often at subsistence level.

Young people are also the majority in the informal sector of their countries, although in countries with a larger informal sector the gap between young people and adults is smaller, as shown in Figure 1.8.

---

4. A study of intermediate-level graduates (Filmus and Moragues, 2003) determined that technically-based options seem to favour immediate job placement on completion of studies: this is the group with the lowest unemployment rates, in comparison with graduates from the General Certificate of Secondary Education (GCSE) or commercially based options (27% of technical students, versus 35% of GCSE or commercial students). In addition, the majority (57%) of technical students went on to further studies, studying and working at the same time. Lower unemployment rates for graduates from the technical school were also observed in studies carried out in other Latin American countries, including Chile (Peirano and Sevilla, 2003). A follow-up study of technological GCSE students in Uruguay concludes that the levels of job placement achieved by graduates with a Technological General Certificate of Secondary Education is higher than that of graduates from general secondary education (ANEP, 2004).
Broadly speaking, young people only have access to poorly paid, precarious jobs, even when they do find employment in the formal sector of the economy. However, differences exist according to the level of education obtained. Those who complete secondary education usually join the circuit of ‘new jobs for young people’ (fast food chains, video rental shops, cinemas, sales assistants in shopping centres) in the formal sector – these jobs continue to be poorly paid and precarious. The better educated youth, who are also supported by their cultural and social capital, are able to aim for better quality and better paid jobs with better working conditions, although these jobs are often equally transitory. The less educated and poorer people are in more critical situations, as shown in Section 1.8.
1.8 Youth: lower levels of job placement for the poor and less educated

The position of young people varies considerably between those who are poor and those who are not. Unemployment rates increase significantly among those on the poverty line, and the lower the level of education, the more the situation is aggravated. In economic recessions, young people from the lowest socio-economic strata are the most severely affected, since they are forced to find employment as their parents are made redundant.

Another significant phenomenon is that young people with higher levels of education tend to displace those who are less educated, even in jobs that do not seem to require high technical qualifications. Minimum levels of secondary education appear to be associated with certain general competencies as well as a certain assumed level of behaviour and discipline, far more than with technical qualifications.

The most severe employment problems affect females, particularly those with a low level of formal education. In fact, among the groups with low levels of education, the unemployment rates for young women exceed those of their male peers by more than half, while in the best educated group (aged 13 and over) this gap is ‘only’ 20% (Weller, 2006).

Young people on the poverty line and/or with the lowest levels of education are forced to accept informal and occasional employment at the worst end of the labour circuit, where they obtain ‘no-qualification’ employment as opportunities to learn at work are limited. This labour segmentation is also reflected in that the selection mechanisms consider not only the level of formal education or qualifications, but also the school attended, physical appearance, attitudes, language, and place of residence of the applicant. An added problem is that much of the available work is reached through social relations networks, which are already limited for this sector of the population (Jacinto, 2002).

Two critical groups from the employment point of view are young women and young people from rural areas. Young women, in spite of having increased
their levels of education with respect to men, have low participation levels, and their presence within the percentage of young people who neither study nor work is high (72%). Young women tend to hold traditionally ‘female’ jobs. Adolescent maternity also has a decisive effect on the employment patterns of young women, serving to widen the gap between genders by preventing young females from continuing their schooling and training for employment to better prepare themselves for the world of work. As a result, they are only able to find highly precarious jobs, mostly in domestic service. One clear example of ‘multiple discrimination’ in Latin America is the situation of domestic workers who, in addition to being female and poor, are mostly from indigenous populations or of African descent. Young people living in rural areas (approximately 22% of the youth in the region) have problems related to the lack of educational and labour opportunities generated in the country, particularly in areas with a high indigenous population. Traditional employment in rural areas tends to be of a temporary nature, physically demanding, and poorly paid, with the result that rural-urban migration continues to be a phenomenon in some countries (ILO, 2007).

For those who do complete secondary education, this is no longer the passport to rising social mobility. This is significantly affected by the dynamics of the employment market and by the growth in unemployment, informalization, and instability of employment in the region. Secondary education is no longer a guarantee for getting a good job: it has become more of a stepping stone. In addition, a secondary education qualification does not hold the same value for everyone. Socio-economic background, family level of education, and the quality of schools attended would appear to be some of the factors determining where secondary school graduates find employment (Filmus, 2001).

Many international initiatives focus on promoting quality education and decent employment for young people. Among these, the UN World Programme of Action for Youth promotes strategies directed at creating youth employment using vocational training activities, the promotion of the entrepreneurial capacity of young people, credit and micro-credit programmes,
the improvement of vocational training and vocational guidance services, training for youth leaders, employment programmes aimed at creating many jobs for young people, support to youth initiatives that create their own income (artistic, cultural, sporting, fashion, eco-technical events), and the monitoring of expanding sectors where new service companies that are potential youth employers are to be created.

What can schools do, particularly at general and technical secondary level, to contribute to providing opportunities for improving youth employment in this context? The trends in this region are described in the following chapters.
2. TRENDS IN TECHNICAL AND VOCATIONAL EDUCATION
AND TRAINING IN LATIN AMERICA

Irma Briasco

2.1 Socio-economic and educational context in Latin America

During the 1990s, the introduction of education reforms in the majority of Latin American countries led to the expansion of the education systems and an increase in the average number of years spent at school by young people. However, these achievements were muted by the new social scenario springing up in the region, characterized by an increase in fragmentation processes and in social inequality. The social panorama places the question of equality as a central theme on the educational agenda for forthcoming years.

The countries in the region display increasing social inequality, reflected in the concentration of wealth, the consolidation of poverty, and the persistence of high unemployment rates with a precarious labour market. Marked differences are observed between countries, and between segments within each country. New areas of vulnerability emerge and the new poor (also referred to as the ‘income poor’) appear alongside the structural poor (Cinterfor, 2001).

According to data from CEPAL-UNESCO (2005), Latin America continues to have the highest levels of inequality in income distribution in the world. Gini coefficients are close to 0.6%, and the proportion of the total income in the richest decile is close to 50% in countries such as Brazil, Guatemala, and Colombia (World Bank, 2004). The total number of poor people is around 220 million, of whom 98 million are indigent or living in extreme poverty. In 2002 poverty affected 41% of the youth, equivalent to 58 million, of whom 21.2 million were extremely poor. In absolute terms, there will be 7.6 million more poor young people than in 1990, and 800,000 more living in extreme poverty. Levels of unemployment have increased in all groups, although they are higher among adults than among youth; the youth
unemployment rate is almost double the global rate. International migration accounts for more than 20 million Latin Americans and Caribbeans living away from their birthplace, with just over 70% living in the United States. One consequence is the increasing importance of remittances in household incomes.

Given this scenario, the proportion of public expenditure on education has increased significantly (the region went from 2.9% of the GDP in 1990 to 4.2% in 2001), and education has become a pillar in the introduction of programmes to combat poverty. In spite of this, less than half of young people finish secondary education. The gaps in educational achievement on the basis of socio-economic level and geographic location indicate significant segmentation, to the detriment of the poorer youth and those living in rural zones. Young people are more successful at school but also have increasing difficulties in obtaining quality jobs.

At the same time, this leads to the recognition that in addition to the known advantages attributed to education as a development strategy (improvements in labour productivity and income, increases in competitiveness and economic growth, and so on), other arguments have recently emerged to reinforce the centrality of education as a key policy for competitiveness and social inclusion. On the one hand, the information economy has converted knowledge into a basic input for the production process, with the result that investment in human capital is necessary more than ever for technological progress, competitiveness, and growth. However, education is also seen as a privileged instrument for the development of social capital and social cohesion. Education contributes to improving reciprocal relations, trust, tolerance, and social integration (Bonal, 2004).

The Introduction highlighted the expansion and differences between countries with respect to enrolment in secondary education (SITEAL).

---

5. SITEAL is a programme jointly developed by the International Institute for Educational Planning in Buenos Aires (IIEP-UNESCO, Regional Headquarters Buenos Aires) and the Organization of Latin American States for Education, Science and Culture (OEI). The programme started in 2003 (www.oei.es/siteal.htm).
Despite this expansion, less than one third of young people obtained a secondary-level qualification. Drop-out rates have remained stable or in some cases increased, and there were also a high number of repeaters. Although the number of years spent at school has increased, a selection process has begun to take place, and sectors with fewer resources have often been excluded from secondary education.

To sum up, the countries of the extended MERCOSUR and Peru, where schooling began earlier historically show a tendency towards a continual rise in secondary education enrolment rates. This results in a higher percentage of the population successfully completing secondary education. In Mexico and the Central American countries, on the other hand, schooling is still delayed, the process of inclusion in secondary education is often static, and drop-out rates are high, with the result that the percentage of the population successfully completing secondary education is lower.

At the same time, a slowdown in the demand for formal employment is accompanied by a devaluation of educational qualifications, and access to quality jobs is increasingly linked to the successful completion of secondary-level education. The phenomenon of qualification devaluation is linked to the expansion of education systems and the impacts of globalization on the relations between employment and education, making education both increasingly necessary and increasingly inadequate (Filmus, 2001).

To modify this situation, it is necessary to understand that the policies of the 1990s have been exhausted, and, as maintained by CEPAL (2004), the vision that directed economic reforms, summarized in the concept of “more market and less state”, should be replaced by a vision directed towards “markets that operate well and a better quality government”.

International Institute for Educational Planning www.iiep.unesco.org
What qualifications should secondary education and higher education provide to avoid the intergenerational transfer of inequalities in opportunities? What place does technical education hold in this context? This applies both to those ‘in the system’ – that is, those able to remain in the education system with the deficiencies revealed in quality assessments – and also to the other half, who are outside the system. Without doubt, these questions refer to structural matters and not only require the construction of a public policy but are also relevant to the whole of society (Castel, 2004).

In this framework, since the early 1990s, references have been made to the unsuitability of vocational technical training, which, of course, is part of a global crisis involving the entire education system.

This chapter summarizes the general characteristics of the structure of the technical and vocational education and training (TVET) programme at the secondary level in five countries in the region: Argentina, Brazil, Chile, Colombia, Mexico, and Uruguay. The trends – and the advances and setbacks – after the reforms of the 1990s are examined below, together with the changes in organizational models, curriculum transformation as a result of the advent of the competency-based concept, new forms of institutional management, and progress in the creation of integrated systems of PTE.

### 2.2 Secondary technical and vocational education and training in the selected countries

In line with the French system, in the majority of Latin American and Caribbean countries secondary education has, for a long time, been organized into a well-defined system with two disciplines: one level that prepares students for university (although not all students reach this level) awarding a secondary education diploma, and the other level, which is made up of various forms of technical and vocational education and training (TVET),
particularly directed towards preparing students for employment (Moura Castro, Carnoy, and Wolff, 2000).

The latter option is divided into two: technical education (TE) and vocational training (VT), designed as two different programmes and operating separately. On the one hand, technical secondary education (TSE) has always been associated with the Ministries of Education, and was designed to prepare students for employment. It was conceived as a subsystem forming part of the secondary education programme, but which also offered technical qualifications in the different sectors and branches of production. The structure adopted a Taylor-Ford style of organization. In 2000, in the majority of Latin American and Caribbean countries, the number of students attending technical secondary schools came to approximately 30% of the students in the region (Moura Castro, Carnoy, and Wolff, 2000). Figures updated\(^6\) in 2006 indicate that the proportion remains the same – Argentina: 25%; Mexico: 28%; Uruguay: 23%; except in Chile (39%) and Brazil (32%), where figures are over 30%.

On the other hand, VT, defined in its origins as a final training system for workers, is characterized by three distinctive elements: (a) independence from the regular education system; (b) flexibility, establishing it as a non-formal system of education; and (c) tripartite government (the State, business and workers), although this is the result of an initiative from the State. Moreover, the programme was centralized in large decision-making and implementing organizations and is known as the ‘S and I’ system (Moura Castro, 1998).

A brief description of the TVET in each of the countries selected is given below, followed by an analysis of the general trends of the system.

---

6 Figures are taken from statistics published in National Education Systems OEI, available at www.oei.es/quipu. The methodological problems of assembling these data are significant, given the lack of comparable elements in national statistical records; the figures were therefore taken from the enrolment distribution by age group.
2.3 **Brief description of TVET in the selected countries**

**Argentina**

The Ministry of Education is the highest body responsible for education.\(^7\) It includes a body responsible for vocational technical education with the rank of a Sub-Secretariat of State, the National Institute of Technological Education (INET), and an advisory body, the National Council for Education and Work (CoNET). This has a tripartite structure, made up of representatives from other areas of the government (Ministry of Employment), unions, and the business sector.

In the early 1990s, the technical schools and vocational training centres were transferred to the provinces, along with the other secondary schools. During this period, Federal Education Law 24.195/93 changed the education system, moving from seven years at primary school and five in general secondary school or six in technical school to a structure where primary education lasted for nine years and secondary or polymodal education for three years. The technical qualification was obtained following the polymodal education system and vocational technical extra-curricular options. The introduction of this reform led to a high level of fragmentation in the TVET programme (*Section 2.4*).

The Law of Technical and Vocational Education and Training (26.058/05),\(^8\) introduced in 2005, aimed at restoring an integrated model of technical education. It established the objective of regulating and ordering TVET at secondary and non-university higher education, respecting federal criteria and regional diversity, and providing a link between formal and non-formal education, general training, and vocational training to form part...
of continuous and lifelong education. The TVET programme includes, links, and integrates the various types of institutions and education programmes for and at work, which specialize and organize training proposals according to skills, scientific and technological knowledge, and vocational know-how. Unlike programmes limited to training for specific, distinct jobs, all the TVET disciplines are directed towards integral training, linked to the personal, occupational, and community growth of the students, with civic, humanistic, scientific, and technical training.

This new law establishes that secondary-level TVET study programmes should last for a minimum of six years and be structured according to the criteria adopted by each province. In addition, it has created the National Fund for Technical and Vocational Education, which guarantees the investment required to improve the quality of institutions. The funds are awarded as the improvement plans presented by the respective institutions are approved. Therefore, the authorities involved, both on a national and regional level, work on advising and supporting schools and institutes in the design of relevant projects. The aim is to ensure that proposals for training are related to the social and production sectors, strengthening links and re-assessing the role of scientific and technical knowledge, so that projects have an internal consistency and are viable and feasible.

**Brazil**

The Ministry of Education and Sport is the highest body responsible for education in Brazil. The education system is organized into three levels: primary education (first level), secondary and technical education (second level), and higher education (third level). Primary education is obligatory between the ages of 7 and 14, and has eight levels. It is free in public establishments. Secondary education lasts for three years and may include vocational training for a basic occupation in a sector.

Vocational Education is divided into three systems: formal, non-formal, and open. The formal programme includes technical education at secondary...
and higher level, managed by public and private universities and technical schools. The non-formal system includes vocational training institutions, linked to the Ministry of Labour, and major tripartite institutions SENAI, SENAC, SENAR, and SEBRAE. (Some technical schools also depend on these institutions.) In addition, it also has the participation of non-governmental organizations, unions, firms, foundations and religious groups. The open programme is made up of a broad network of private establishments mainly offering short courses.

Until February 2004 secondary education was managed by the Secretariat for Secondary and Technical Education, which was part of the Ministry of Education and Culture (MEC). However, as part of a ministerial restructuring process, in 2004 the incoming government handed the management of this level of education to the Secretariat for Primary Education (SEB) while also creating the Secretariat for Technical Education (SETEC), responsible for the formal TVET system, federal level and provincial/municipal level. The first is made up of federal centres of technical education, technical schools, agrotechnical schools, decentralized units and technical and agricultural schools answering to the federal universities.

At the end of the 1990s, a series of government projects were designed, aimed at introducing into the system innovations proposed under the Law of Guidelines and Bases for Education (LDB). These included the Project for the Expansion of Vocational Training (PROEP), financed by the World Bank (WB) and designed to foster training for employment by increasing the gap between the programmes for academic secondary education and for vocational secondary education. Both the PROEP and Federal Decree 2208/1997, followed by the National Curriculum Guidelines for Secondary Education of 1998, were aimed at modernizing secondary education and vocational training to bring it in line with advances in technology and to meet the demands of the labour market, with its requirements for flexibility, quality, and productivity. Secondary education was to coordinate competencies and civic education and prepare students for employment by providing specific skills – that is, it should prepare ‘for life’. However, vocational education
was to complement this by developing the skills required for the world of production and was aimed at basic secondary or higher education students and graduates as well as at workers, irrespective of their level of education. This decree established that the technical level of the VT programme was aimed at students or graduates with a secondary-level education, and it could be followed simultaneously with or after regular studies, but not as part of these studies. Students who completed secondary-level education and passed all the modules of a vocational programme together with the required vocational practical sessions received a technical secondary certificate. The change of government brought with it strong criticism of the policies introduced by the outgoing government in this respect (Section 2.4). Since 2004, the government has been working on the project for the New Law of Guidelines and Bases for National Education which has still to be enacted.

Chile

The Ministry of Education is a technical and supervisory body but not an administrative body, as in Chile education is decentralized. Centres of education are municipal or private (subsidized or not subsidized), or they are run by private corporations. The Ministry of Education relies on the Department of Technical Vocational Education to direct TVET policies.

Secondary education, which follows eight years of primary education, lasts for four years, is compulsory, and consists of two two-year ‘cycles’ (levels) – or, exceptionally, technical education lasts for five years. Since the curriculum reform of 1995, the first two years of the training study common material, splitting in the second level into the general scientific–humanist branch and the technical–vocational branch which provides simultaneous general and vocational training.
In 1995, the training of secondary-level technicians ceased to be a discipline within secondary education but took its own place in secondary education (differentiated training), as initial preparation for employment, combining training in a speciality with general training. The differentiated training of the vocational–technical programme offers students the opportunity to follow specialized training defined in terms of final objectives (grouped by graduation profile) that correspond to 14 occupational sectors and 46 specialization profiles.

To define the differentiated training of the Vocational Technical Programme, in 1995 considerable research was carried out to establish the basic objectives and minimum compulsory content required for secondary education. June 2002 saw the start of the Programa Chilecalificada (Qualify Chile Programme), jointly implemented by the Ministries of Economy, Education and Employment, and Social Welfare, with the financial backing of the International Bank for Reconstruction and Development (World Bank), and recommendations were put forward for the creation of a continuous education and training system. This includes the development of technical training paths, the introduction of the national system of vocational competency certification, the institutionalization of the quality assurance system, and the creation of networks to coordinate training and production systems, organized in sectors, together with the strengthening of dual training.

These two lines of work have a common element: to coordinate training and production by bringing business closer to educational institutions in order to foster a commitment to the results of technical training.

Currently, the changes taking place in the training of secondary-level technicians are part of a fundamental process of transformation in the national education system, directed at improving quality and equality.

Colombia

The Ministry of National Education is responsible for the education sector. At a regional level, this is made up of Secretariats for District, Departmental,
and Municipal Education, with the attached institutions. Technical education does not have one governing body to establish policies to improve the quality of the education in either the official or the private sectors. It is financed by the government, by religious organizations, and by non-governmental organizations.

Law 115/94 provides the structure for the education system, including formal, non-formal, and informal education. Formal education is given by official and private institutions, under the supervision of the Ministry of Education. It covers the following levels: pre-school and primary (6–15) – both compulsory – and secondary and higher.

Secondary education is either academic or technical and leads to the baccalaureate. It is not compulsory. It is directed at 16- and 17-year-olds, and it offers two levels of training: Grade 10 and Grade 11. The academic programme is aimed at providing more detailed studies in a specific field in the sciences, arts, and humanities; the technical programme prepares students for employment in one of the production or service sectors.

The educational institutions enjoy some independence with respect to the establishment of study plans, provided they are in line with the central curriculum parameters and those of the territorial bodies to which they belong.

Technical training, independent from the baccalaureate, is offered by way of non-formal education, which offers qualifications to technicians who have completed a minimum of 1,000 hours, and higher education programmes, which prepare vocational technicians in four academic terms and are required for the baccalaureate.

Non-formal education is controlled by the Ministry of National Education and the Ministry of Employment and Social Security, through the National Training Service (SENA), the business sector, and non-formal education institutions. SENA is a corporate self-funded and independent body with administrative autonomy. Self-funded with parafiscal contributions
from businesses, it offers a regular programme for the training of technicians, technologists, and specialist workers.\textsuperscript{9}

In addition to SENA, the country has vocational technical institutions and technological schools offering further technical education, as well as training organizations that, although authorized by the Ministry of Education, issue certificates of occupational aptitude that have no academic validity. SENA's participation in technical secondary education appears to have been boosted in recent years (Section 2.4).

\textbf{Mexico}

The General Education Law of 1993 legally defines the National Education System, made up of educational institutions associated with the government, decentralized bodies, and independent and private institutions.

Secondary education (compulsory) is offered over three years to 12- to 16-year-olds who have successfully completed primary education. Students over 16 may either study at secondary schools for workers or in the adult education programme. The upper secondary education system has three programmes:

a. The baccalaureate, which prepares students for higher education and is offered at four types of institutions.

b. Vocational education and training, which qualifies the young person in various specialities directed towards the labour market. However, the diploma obtained under this programme neither supports nor guarantees intermediate employment in the labour market. The discipline is offered in seven different types of institutions.

\textsuperscript{9} In 2003 SENA introduced virtual learning, and in 2004 it launched the SENA 24-hour programme, which extended the coverage offered by professional training and the use of training centres. The virtual learning programmes were one of the strategic pillars that enabled SENA to grow by 26\% in the last four years, going from a total of 1,142,798 places on a variety of learning programmes in 2002 to 4,148,809 places in 2006.
c. The technical baccalaureate prepares the student to go on to higher level education and to carry out a productive activity. It is taught in ten different types of institutions.

Technological education is conceived as a group of institutions created to provide education in research and technological development, community care, technical consultancy, and cultural diffusion. In this framework, the technical baccalaureate is an upper-secondary-level programme of a bivalent nature linked to the industrial, agricultural, forestry, and maritime sectors. The PTSE institutions are divided into three groups: centralized institutions, decentralized institutions, and regional institutions, forming the National System of Technological Education.

Coordination of the National System of Technological Education is the responsibility of the Council for the National System of Technological Education, an advisory body of the Secretariat for Public Education (SEP). The central task of the Directorate General of Vocational Training Centres (DGCFT) is the training of human resources to meet the needs of the production and service sectors. It is responsible for the training – for and at work – offered at the Centres of Education for Industrial Employment.

In 1995, the Project for the Modernization of Technical Education and Training was set up. This aimed to improve the quality of services and bring the programme more into line with the needs of the work force. The core proposal was to promote the development of modular courses based on vocational competency standards. This gave rise to the Occupational Competency Standardization and Certification Council (CONOCER), whose task is to produce standards for the certification of the labour competencies of workers. The council is made up of representatives from the private, social, and public sectors. At the same time, the education programme of the institutions offering technical education and training for employment was changed. The National College of Vocational and Technical Education (Conalep), the Directorate General of Technological and Industrial Education
(DGETI) and the DGCFIT took part in this process. In 1998, the Directorate General of Agricultural Education (DGETA) and the Unit for Education in Marine Science and Technology joined the project.

In addition, coordination agreements were formed between the Secretariats for Social Development, for Agriculture, Livestock and Rural Development, for Public Education, for the Environment, Natural Resources and Fisheries, and for the National Council of Science and Technology.

**Uruguay**

The education system here has a centralized administration formed by different organizations: the Ministry of Education and Culture, the Coordinating Commission for Education, the University of the Republic, and the National Administration for Public Education (ANEP). It is organized into pre-school or initial education, primary education, secondary education (lower and upper), and higher education. Education is compulsory from pre-school to lower secondary education, and lasts for 11 years. Secondary education prepares the student for higher education and consists of a three-year basic common and compulsory level and a three-year upper level, which is not compulsory. This course can be taken at institutions associated with the two regional organizations of ANEP: the Council for Secondary Education (CES) and the Council for Technical and Vocational Education (CETP). The two organizations offer the lower-secondary level with identical educational objectives: to sharpen skills in reasoning and experimenting, and to develop analytic abilities. The programmes of education for the higher level are, on the other hand, very different (Finnegan, 2006b).

The diversified baccalaureate is the main option at the CES colleges and institutes. The TVET has different disciplines ranging from one to seven years in length and provides training for secondary-level technicians, higher-level technicians, and qualified workers, adopting different educational programmes aimed at the agrarian, industrial, service, and artisanal sectors.
The upper secondary-level training programme of the CETP is offered at technical schools (polytechnics, specialized, agrarian) and includes technological secondary education and vocational secondary education. The first is taught in the framework of the technical baccalaureate, created in 1997 as part of the structural reform of vocational technical training, and leads to the auxiliary technical baccalaureate (Section 2.4).

In addition to the CETP programme, there are three further associated organizations: the Council for Vocational Training, which complements the CETP activities, the Centre for Vocational Training directed at marginalized young people and adults, and the National Centre of Technology and Industrial Productivity, which is particularly aimed at private enterprise.

2.4 Trends

The educational reform processes in the 1990s in Latin America have defined a new scenario for the TVET. In recent years this has emerged as the consolidation of certain lines and the review of others, depending upon the country. These trends are highlighted below.

Review of organizational models of technical and vocational education and training within the secondary education programme

As mentioned above, the 1990s saw major structural transformations in the countries discussed, accompanied by a tendency to include vocational technical education, at secondary and higher levels, in the general educational system, through general ordinance laws. The majority of the countries are trying to make schooling compulsory for a minimum of ten years, and in some cases, such as Argentina and Chile, intermediate secondary education is also compulsory, as well as delaying early specialization. With respect to the case of Chile and Argentina, María Antonia Gallart stresses that:

10. Section 3.1 is essentially based on Finnegan (2006a).
the objectives of the reforms were similar: to improve social equity and economic competitiveness, modernization of secondary education and decentralization towards levels that are closer to the educational process. With respect to TVET, the objective was for general education to fill a broader portion of the curriculum in order to permit better development of basic competencies, critical capacities, and problem-solving abilities; it also aimed to delay specialization in VT in specific careers until the last years of secondary education. The programme was modified, changing the number of specialities and modernizing graduate profiles (Gallart et al., 2003).

The changes made to the structure of technical education in the 1990s were unsuccessful in Argentina and Brazil, and have recently been reviewed. Their assessments and the debates are highlighted below.

In Argentina, the objective of designing flexible proposals through vocational technical careers lacked political and technical feasibility when introduced. This led to high levels of fragmentation of the programme at the national level. Gallart (2003) indicates that the institutional arrangements to which provincial bodies were forced to resort as a result of the relocation of teaching staff contributed to advancing early specialization and thus frustrated the objective of delaying it. In 2003, under a new government, the INET itself stated that very varied curriculum combinations of the contents prescribed for the polymodal level and for technical and vocational careers had been developed in a number of jurisdictions. In some cases these included the basic common content designed for the third level of general primary education and the modules related to the world of employment and pre-vocational careers. Until 2003, the introduction of technical and vocational training was fairly varied, with different levels of institutional and curricular complexity, a range of hours of training, different ways of tackling apprenticeships, together with different styles and links to the employment world. In this situation, the qualifications awarded resulted in difficulties both in potential employer sectors and when enrolling at vocational colleges (Almandoz, 2003).
led to the introduction of the above-mentioned Law 26.058,\textsuperscript{11} aimed at reintegrating the technical school (Section on Argentina).

In Brazil, when the Lula government took over the educational authorities in 2004, there was critical analysis of the policies introduced by the outgoing government. As a result, broad agreements were reached on the need to revoke Decree 2.208/1997, based on the idea that regulation had distorted the spirit of the regulated LDB, producing effects contrary to those sought by the law. Academic texts and recent official documents supporting this posture confirm that:

the above decree clearly established a division between secondary education and vocational education, generating different systems and networks, characterizing a structural duality. This implied the non-recognition of primary education as essential for scientific and technological training. At the end of the day, the question of costs tinged the bases of these definitions. Thus, on the one hand, the separation of education networks has allowed the democratization of access to be defined through regular secondary education of a general nature. This is far less costly to the state than vocational secondary education. However, it has advanced the possibility of reaching agreements with private initiatives to maintain and extend the vocational education network. The regarded decree clearly established a division between secondary education and vocational education, generating different systems and networks, characterizing a structural duality. This fact meant the non-recognition of primary education is a key factor for scientific and technological training. Undoubtedly, a question of costs is at the base of such definitions. Thus, the separation of the education networks allowed on the one hand the democratization of access by means of a regular general secondary education, which resulted to the government in a less costly option than a vocational secondary education. On the other hand it encouraged the possibility of signing agreements with the private sector to preserve and extend the vocational education network (MEC/SETEC, 2004).\textsuperscript{12}

\textsuperscript{11} A new law referring to the whole system, No 26206/06, was also introduced, returning to the earlier four-tier structure (initial, primary, secondary and higher) and making secondary-level education compulsory.

\textsuperscript{12} The base document is available at: http://portal.mec.gov.br/setec/arquivos/pdf/documento_base.pdf
According to this perspective, the reform of vocational education removed technical training from schools by eliminating the primary education content and seeking to meet the immediate needs of the employment market. Critics of these policy approaches state that:

the Decree not only forbade integrated training, but also regulated fragmented and limited forms of vocational education according to the supposed needs of the market, which also occurred at the initiative of the Ministry of Employment, through their vocational training policy present in the National Plan of Vocational training (PLANFOR), later called the National Qualification Plan (PNQ) (Frigotto, n.d.).

Decree 2.208 was abolished, and in June 2004, Decree 5.154 was approved, permitting coordination between technical and vocational education at secondary level and secondary-level education,13 through one of three programmes:

1. **Integrated**, available only to those students who have completed primary education. The programme is planned to lead the student to vocational technical training at secondary level, at the same school or college, with a single enrolment for each student.

2. **Concomitant**, available only to those students who have already completed primary education or are studying at secondary level, where the complementary nature of vocational technical secondary education and secondary education requires new enrolments each year. These may take place:
   a. at the same school or college, exploiting available educational opportunities
   b. at different schools or colleges, exploiting available educational opportunities

---

13 The Programme for the Integration of Professional Education in Secondary Education in the Programme for Education for Youth and Adults was introduced in the same year in the sphere of federal technological education institutions. This programme included the announcement of courses and programmes for the initial and ongoing training of workers and professional technical education at secondary level.
c. at different schools or colleges, through agreements of inter-complementariness, monitoring the proposals and development of standardized pedagogical programmes.

3. **Subsequent**, available only to those students who have completed secondary education.

These definitions led to a new articulation of intellectual and technical functions, on the basis of a concept of training that includes science, technology, and employment as intellectual and instrumental activities. This implied the recognition of the value of primary education in the training of the employee and therefore the inadequacies of vocational training as an isolated programme.

When the legal tools necessary to implement this programme had been defined, the MEC introduced the technical secondary education programme into secondary education. The Secretariat for Primary Education provided aid through technical and financial support agreements to the government bodies attached to the programme in order to lengthen secondary education by one year. This extension was introduced gradually over a four-year period. It was conditioned by the availability of suitable physical infrastructures in the establishments, together with the availability of teaching personnel to carry out the project. Once support for the proposed schools had been obtained, the SEB consultants worked with civil servants and teachers involved in the analysis and training linked to the dissemination of the base regulations, the curriculum design, coordination with the local social and productive context, and the preparation of a plan for the introduction of the reform. During 2005 a total of 28,613 students benefited from the programme (MEC/SEB, 2006). SETEC has just launched a new programme of technical occupation with competency-based training.

The TVET transformation process in Chile follows similar lines.
Colombia has also recommended the ordinance of a work-oriented training system with two main objectives: (1) to integrate and coordinate all the regulated vocational, occupational, and ongoing training subsystems into one coherent and organized system; and (2) to standardize and accredit the broad and varied range of programmes offered by public and private institutions.

Since 2004, recommendations have been put forward to link SENA to technical secondary education. These generally involve the implementation of SENA programmes in the tenth and eleventh grades of secondary education, in order to provide vocational competencies in the occupational field chosen by the educational body, but adopting national, departmental, regional, or local development plans as reference. It aims to provide the graduate with a double qualification: the technical baccalaureate, awarded by the secondary school, and the certification of approved modules or the Certificate of Vocational Aptitude (CAP) corresponding to the technical speciality, awarded by SENA. This initiative has been formalized through agreements between SENA and the Secretariat of Education in the case of state colleges and between SENA and the college in the case of private institutions. The holder of the CAP is able to follow subsequent training in the speciality. SENA offers advice for selecting the training programme to be developed; it transfers the training programme (curriculum structure and teaching methods); it provides technical and pedagogical updates for teachers and performs regular evaluations of the students, offering certificates to those students who reach the objectives established in the training programme (SENA, 2004). According to figures published by the MEN in March 2006, the policy successfully reached 58.92% of the students involved (172,391 students included in the project, out of the 292,566 students targeted over the four-year period 2002–2006). At the technical secondary education institutions that had signed training and accreditation agreements with SENA, the percentage came to 88.02% (1,712 institutions involved out of a target 1,945 for the four-year period).
The educational reforms of the 1990s in Uruguay led to public policies for the reformulation of technical education as a whole. The most notable initiative was the creation of the technical baccalaureate (BT) in 1997. This was an upper secondary education programme lasting three years, aimed at providing a double qualification: the successful completion of intermediate secondary education and a vocational qualification (that of auxiliar tecnológico). It offered students the opportunity to continue to higher education, to access employment, or to continue their vocational technical training. The transformation started in 2004 with all the technical programmes under the BT, except for thermodynamics and industrial chemistry. The reformation aimed to provide training for specialists by coordinating the entire technical programme, particularly at technical secondary level (one-year course complementary to BT) and higher technological or technical level (two- or three-year training complementary to BT), with the option of combining or validating the year spent studying the technical secondary programme.

In addition to the BT at secondary level, the basic level was established in technical and agrarian disciplines. This aimed to introduce young people to technology at an early stage and to expand their vocational options. An optional technical component was also offered as an extra-curricular activity for students in the common secondary level basic cycle. The study plan was organized as a common programme with a second core encompassing the technical subjects of the programme, both lines awarding credits for further vocational training.

Based on the transformations taking place in the plans for the technical baccalaureate, in 2002, as part of the process to transform upper secondary education, proposals were put forward for a review of the common core subjects and the expansion of technical capacity in order to give some consistency to the Plan and to make it easier to move between disciplines. In addition, optional and decentralized spaces were established according to the needs of young people.
Recent trends in technical education in Latin America

Curriculum transformation: the advent of the competency-based concept

As part of the reforms over the last decade, the concept of competencies became part of the national education agenda in the form of competency-based education (CBE), competency standards-based education (CSBE), or competency-based training (CBT). These programmes are intended not only to recognize and certify the competencies obtained through training processes but also to capitalize on skills obtained in other spheres, such as in a vocational environment. This involves the multiple transformation of the training systems: of the curriculum, the management model, and the training of the personnel concerned: instructors, facilitators, teachers, technicians, and supervisors.

Each education administration defines the concept in terms of certain special features. However the ILO14 R195 (ILO, 2005) agrees on the use of the categorization of basic competencies, employability, and specific technical competencies.

Analysis of certain national approaches

In this ten-year period, Mexico carried out a thorough evaluation of CONOCER, and of the entire secondary education reform process. A report by the Inter-American Development Bank (IBD) detected inadequate mastering by graduates of certain key competencies, including basic linguistic and analytic thinking skills; study programmes hindering the transfer between different disciplines; lack of coordination between educational establishments, teachers, students, and production sectors; scarce and scattered teacher training in the introduction of the new study programmes; obsolete equipment, workshops, and laboratories hindering the implementation of innovative ways to access relevant and up-to-date technologies.

14 Recommendation 195 of the ILO defines the term competencies as covering: ‘the knowledge, skills and know-how applied and mastered in a specific context’.
In response to this diagnosis, since 2004 the SEP has been following the Competencies-Based Human Resource Training Programme (PROFORHCOM), Phase I (2004–2007) which was financed by the IBD. The programme seeks to improve the relevance of technical and vocational training (PTT) and to consolidate CONOCER. Under the umbrella of the PTT, the objective is to improve the relevance, effectiveness, and quality of the educational programme offered by PPT and training for employment. Finance is provided to design curriculum and information programmes, links with enterprise, and technical support. The aim of CONOCER is to obtain at least 10 production sectors that issue and require Technical Standards for Vocational Competencies (NTCL) in order to improve the efficiency of human resource management in companies and to recognize the competencies of individuals.15

The measures for curriculum development proposed by PROFORHCOM promote the design of plans and programmes for the different systems involved in technical education, taking the key competencies and transversal competencies as key references to the NTCL. The programme recommends different initiatives for the various areas of upper secondary education and vocational and technical education (CONALEP), technological education, and the baccalaureate, based on a diagnosis that varies according to the level of progress of the preceding programme in each case.

The changes of government in 2003, in Argentina,16 and in 2004, in Brazil,17 were a critical factor, opening a debate with respect to the competency systems. In Brazil, the competency training model supported by the reform

---

15. Part of the programme focuses on offering incentives to cover increased costs incurred to overcome the difficulties faced by enterprises in adopting the competency approach in the management of human resources. The Programme to Support Training and Employment run by the Secretariat of Employment and Social Welfare has been set up for this purpose and provides financial backing for the training of personnel in enterprises. In addition, it recognizes the need to provide aid to low-resource populations to assist in obtaining labour qualification certificates, which must be paid for.

16. In the case of Argentina, opposition came from the Ministry of Education, while the Ministry of Employment continued to develop the matter, even producing publications with Cinterfor/ILO, financed by the IDB.

17. SETEC has just launched a new programme of technical courses with competency-based training (http://portal.mec.gov.br/setec/).
was criticized, mainly because it ideologized the concept where the interests of the enterprise were displayed as the interests of the workers, or even as fringe benefits. The concept reduces a complex process of human training to one of its specific aspects – the performance of practical and useful tasks (MEC/SETEC, 2004). The official document emphasizes that the concept does not influence teaching practice for two main reasons: the resistance of the teaching sector to subscribing to a model designed to control the educational process in order to guarantee targets and results, and the absence of more specific programmes to organize the training of competencies and skills according to the characteristics of students and schools. Given this scenario, proposals were put forward to work with the concept of competencies as a necessary skill for understanding and critical action.

As part of this reform process, various policies have been introduced in Chile in recent years to strengthen the sector and support the transformations. These included an active line to coordinate general training with specialized vocational and technical training introduced in the PTSE colleges. The proposal bases the relevance of this integration on the fact that obtaining the technical competencies implies the activation of skills studied in the first and second grades of secondary education, together with the integrated development of the basic objectives for learning in the third and fourth grades of general secondary training and of specialized vocational and technical training. The initiative aims to reinforce the idea established in the curricular framework of the programme. Here this link and the GT study programmes are explicitly indicated in the speciality modules, which propose clear links to the world of employment, economy, technology, science, and language.

The intervention strategy of the Ministry of Education in this area is directed towards the creation of Interdisciplinary GT-ST Workshops and Agreements for coordination between general and specialized training in the PTSE.

Legislation in Uruguay in 2002 supported a three-year duration for technical secondary education (TSE) and the introduction of programmes in a technological environment from the first year. According to the definition,
the TSE is directed at the integration of a set of scientific, technological, technical, and social competencies that contribute to the integral development of students. In particular, this education fulfils the dual function of permitting employability – with the corresponding qualification – while also permitting students to continue post-secondary education within or outside the subsystem of technical and vocational education and training (technical degrees, technology, teacher training, or university degrees). Technical secondary education provides an intermediate level on the path towards obtaining the post-secondary technical qualification. The qualification for graduates from this level is the technical baccalaureate in the corresponding programme.

The proposal reaffirms the competency training approach already assumed in the creation of the BT, as the curricular structure meets the organizational logic of spaces and curricular paths indicated by the upper secondary education transformation process. The curricular spaces follow a horizontal logic, and the paths follow a vertical logic. Curricular paths are established routes through the different subjects or laboratories that guarantee that competency-based training is equivalent in the different disciplines and programmes (CETP, 2002).

The countries moving towards competency curricula have included basic and technical competencies. However, it is likely that a more coordinated approach towards employability will still be required. Efforts to date have focused on curricular design. A didactic strategy for TVET in the framework of CBT (a situation that is to be included from the initial teacher training level) has yet to be developed. Pedagogical strategies, educational materials, and teaching practices that contribute to the development of such competencies are required. The idea of quality is gradually being adopted based on the very low results such as those emerging as various countries take part in the trials for the PISA programme.
The Ministries of Education set competency-based training in secondary, higher technical, and technological education. The TSE is being called upon to largely resolve the dissociation between academic training and training for employment. Broadly speaking, the educational reforms being developed in the region follow the approach of an education based on the construction of a broad range of competencies.

2.5 New ways to manage TVET: towards project-based management and the inclusion of the business relations area

The trends described above are closely linked and have a significant impact at the institutional level. New models of flexible management emerge, adapting to the uncertainty of the environment, and the concept of ‘institutional transformation’ is established as the organizer.

The strategies used include the training of institutional transformation groups to lead permanent processes of change, expressed in institutional pedagogical projects, also referred to as institutional educational projects; an increase in relations with enterprise and training at work centres; the inclusion of strategic alliances to improve the presentation of the centres; the implementation of direct measures to improve pedagogical, teaching, and managerial dimensions, including inputs produced by evaluations applied at different levels of the institution; the inclusion of information systems, capture of indicators, monitoring of graduates, and employment guidance and information, organized into observatories that go beyond the institution and belong to a local or regional level; the development of monitoring tools and indicators that highlight the relation between education and employment.
permitting the interaction of multiple actors to direct the programme; the organization of special programmes for disadvantaged populations; and the design and introduction of various intervention mechanisms.

Concern for the construction of innovative strategies for coordinating with the production sector has led to the inclusion in the organization’s charts of an area responsible for institutional relations to establish links with the enterprises, and coordination with the social and productive environment. The most advanced example is that of the Federal Technical Education Centres (CEFET) in Brazil. In addition, this contains models that have already been consolidated from the S and I systems.

A dual system was introduced in Chile in 1995, involving (although voluntarily and gradually) all secondary-level technical and vocational teaching institutions. The system allows technical and vocational training to be conceived as an activity shared between the educational institution and business. This has led to training alternating between the two sectors. The dual training format grew at a steady pace. In 2007, 24,000 students were trained in 221 establishments, with the participation of approximately 9,500 enterprises (5,847 small enterprises, 2,291 medium enterprises, and 1,362 large enterprises) (Miranda, 2007).

Another aspect of note is the more recent participation of technical schools in local and/or sectorial vocational training networks. This occurs from the S system in Brazil to the networks supported by Chilecalifica. In the latter, finance is offered for training projects and employment networks linked to sectors previously identified as having priority in the development plans of regional governments.

Although identified as a trend, the remaining challenge is undoubtedly that of linking TE to national PT institutions. In Colombia, efforts have been made for several years, but there is little evidence of coordination in other
Recent trends in technical education in Latin American countries – for example, in Brazil, where technical education runs parallel with vocational training.

A transformation at macro-level is required for these structures to become viable, that is, the formation of national TVET systems. In this respect, the relation of institutions with application for coordination is being redefined, gradually assuming increased independence. Emphasis is placed on evaluation and the results obtained rather than coordination in institutional planning.

The design of new management models is essential as a competency-based curriculum cannot be introduced in the traditional style of institutional management (Briasco and Vargas, 2002).

2.6 Towards the construction of integrated systems of TVET

The introduction of CBT would enhance coordination between the PTSE and VT programmes in accordance with the demands and requirements of local production economies. It would also order the system, providing it with a national and supranational rationality, enabling the free movement of individuals within the framework of the sub-regional integration processes.

These concepts are present in the prevailing transformation processes in the countries in the region, but, in the majority of cases, as the Ministries of Education and Employment develop parallel policies, coordination is left at the level of discussion. This results in ‘restrictions’ in the distribution of responsibilities with respect to certification and evaluation, reflected in lower levels of development in competency-based training than in the majority of other countries. In the 1990s, Mexico, with CONOCER, invested a significant sum of money and effort in certification with very low results, leading to an in-depth evaluation to redesign current TVET policy.

---

20. At present, the proposal to coordinate secondary-level PTE with secondary education explicitly calls for a variety of institutions linked to both training programmes: secondary-level and technical establishments belonging to the federal, state and municipal networks; System S Centres; public and private universities which also offer graduate and postgraduate training; community extension proposals; schools and centres supported by workers unions; schools and foundations dependent on business groups, denominational, community, educational non-governmental organizations, etc.
The need to coordinate the different providers and sectors calling for training led to the creation of organizations formed from different sectors of the society, many of them of an advisory nature. One of the objectives is to design an integrated curriculum (TE-PT) to facilitate internal mobility and allow students to enter and leave the system (‘bridge’ or ‘gangway’ strategies).

The proposals of national systems in, for example, Chile, Costa Rica, Bolivia, Colombia, Paraguay, and Brazil (not in the same way, but as a definition of inter-sectoral goals) reflect the general concern for the need for coordination. These initiatives recommend coordinating the programmes of different institutions, particularly dialogue between VT and TE circuits. The situation also arises from the recognition of two requirements: the strengthening of basic training (viewed as a basic component of PTT), and the continuous updating required to remain in the employment market.21

Colombia is introducing a national system of employment training led by SENA, which aims to coordinate TE and VT, and the Ministry of Education has adopted the competency approach for secondary and technical education.

Brazil has launched a new technical occupations programme with competency-based training through the SETEC. Some years ago, Peru, in collaboration with Spain, adopted competency-based curricula in technical secondary education.

Within the continuing training system, Chilecalifica designed the coordination of technical training, allocating public grant funds to projects and plans for network coordination (as mentioned above), tending to smoothly link formal education, vocational training, and the recognition of informal learning. In addition, this scheme was expected to lead to an increase in the

---

21 This process involves the redefinition of the concept of lifelong education, as a continuum incorporating formal, non-formal, and informal education, as defined by the ILO in Recommendation 195 of 2005, concerning human resources development: “education, training and lifelong learning, where this encompasses all learning activities undertaken throughout life for the development of competencies and qualifications”.

International Institute for Educational Planning www.iiep.unesco.org
number of enrolments at a higher technical level, in order to fill occupational
niches currently left vacant and to reduce the pressure for university degrees
with a saturated labour market or over-qualification for the jobs available
(Chilecalifica, 2006). One of the initiatives of the programme was the
drafting of the bill for the creation of the National System of Accreditation
of Occupational Competencies and the updating of the National Statute of
Training and Employment. The ruling aimed to regulate finance mechanisms
with public resources in order to contribute to the employability of workers, to
increase enterprise productivity, and to enhance the opportunities for lifelong
learning, together with their recognition and evaluation. A central line of this
regulation, presented to the Congress in 2004 and passed in June 2008,22 is
the separation between the training body and the body providing assessment
and qualification.

2.7 Issues pending

In spite of persistence in introducing TVET transformation programmes,
several of the areas discussed above are still pending. There is, undoubtedly,
a gap between the discursive level of the reforms and verification of their
limited progress. The concepts of modernization, reform, and transformation
have been drained of content and have lost the power needed to produce the
changes forecast.23 If the processes described have anything in common, it is
the lack of synergy between the development of systems to manage the TVET
programme at the macro level and strategies for institutional transformation
at the macro level. This situation is even worse in countries with a meso-level
and is not included as a stage in sub-national planning.

A description of the issues pending is provided below, and new planning
levels are identified:

23. In view of this, the OECD proposed the introduction of the concept of “reinvention” (OECD, 2007, indicating
    that this problem also occurs in developed countries.
**Macro- and meso-levels**

The reform processes fall within a general policy framework of transformation of state structures in Latin America. Therefore, the costly processes introduced by the governments in the region should be able to account for the benefits – economic, educational, social, and psychological – of the reforms. This would require strengthening of the monitoring, follow-up, and evaluation systems, provide feedback on the processes, and manage relevant knowledge, including the issue of feasibility construction on the agenda for the introduction of these reforms.

The design, introduction, and appropriation of mechanisms for communication between the different sectors, in order to guarantee good work, became a key factor in the sustainability of educational policies – in this case, those of the TVET.

The inclusion of the concept of lifelong learning 24 would involve the generalization of competency-based curriculum design, permitting the construction of training paths. This would give rise to the need for national frameworks, and would also press for sub-regional processes of integration, which would provide the starting point for the accreditation of non-formal and informal learning (VANI). 25 In addition, this would facilitate coordination of secondary-level education with primary and higher education, leading to a situation that has not been consolidated in any of the countries. The management of the systems requires the construction of diversified gangway routes, paths, or itineraries of a preparatory nature in order to achieve the flexibility imposed by the changes.

---


25. The countries of the European Union are nearing the construction of the European Framework of Qualifications for lifelong learning. The novelty of the system consists of the establishment of eight levels of knowledge, skills, and competencies, encompassing all the qualifications that an individual might obtain from compulsory schooling to the highest levels of education and academic and professional training. The levels are based on the skills and competencies of the individual.
In forthcoming years, work must continue on the expansion of general training and its resultant reconceptualization, incorporating suppositions of scientific and technical literacy and a new culture of work, in addition to generating strategies that ensure that secondary schooling becomes obligatory for all young people. The need to redefine the meaning of specialization and to guarantee quality on the speciality programme is also essential.

There is a long way to go before the consolidation of new strategies for coordinating with the production world, beyond traditional models and directed towards the construction of sectoral networks. This requires legislative correlation, generating the legal framework to permit the exchanges to take place.

Significant resources have been allocated to teacher training. The results were not as expected. It is imperative to design new strategies to overcome the model that considers training as an accumulation of courses and does not include the construction of new competencies required to lead the processes of reform. The development of relevant measures put into practice requires significant institutional support, in close collaboration with policies at the macro- and meso-levels.

If teachers are considered to be the backbone of education policies, a new level of teaching professionalism is required, encompassing initial and ongoing training, in pedagogical training (with an emphasis on didactics), competency-based training, and scientific and technical training and innovation.

The educational task at the macro- and meso-levels requires the organization of technical teams to provide institutional support, transforming technical assistance into educational units. These technical teams would be formed by identifying teachers of educational units who, using a rota system, would move between the different areas of teaching. Given these levels of planning, this would favour the exchange of experiences, constructing networking from the programme – including its different levels – and
encouraging the identification of schools to act as sectoral centres of reference, meeting the demands of the whole occupational structure.

**Micro-level**

The institutions that are the driving force behind the reforms must become involved in the development of institutional transformation programmes, with support from macro- and meso-levels, to provide technical assistance.

The management of the programme should be directed towards the development of methodologies for systematized work. These will include the design of institutional pedagogical projects as part of local development; the development of project work; decision-making processes, monitoring and evaluation of results; inclusion of services for graduates (advisory, vocational refresher courses, induction, support in the first job, and so on) with the corresponding monitoring, integration of multiple actors through strategic alliances, extending the concept of *business relations* to *institutional relations*. Options and opportunities for the participation of business people, management, and employees in the management of the institutions must be diversified.

Institutional transformation involves the strengthening of executive teams in the management of the TVET, which includes analysis of the environment, CBT, institutional relations, organizational change, resource management, evaluation (of quality and institutional and external auto-evaluation) and project implementation.

The implementation of competency-based systems will also have an impact on educational practices. To manage this, it is necessary to streamline and make more flexible bureaucratic administrative structures and legal frameworks, and to develop actions in the above-mentioned areas of teaching activity (teaching-learning and didactic support) and the production of information (materials, activity guides and work methodologies).

---

Recent trends in technical education in Latin America

The development of these various areas will require, as indicated above, permanent technical assistance at the macro- and meso-levels, in addition to coordination with training centres, creating teacher training programmes at the institutional level relevant to the institution’s education project and within the guidelines of the national educational policy, as a kind of assisted teaching practice.

To sum up, the key task today for the countries in the region is to orchestrate national training systems and work force development systems to permit the coherent and efficient coordination of the different available resources and promote values of equality and competitiveness.
3. PREPARING FOR WORK IN GENERAL SECONDARY EDUCATION: RECENT DEBATES AND APPROACHES IN LATIN AMERICA

Claudia Jacinto

3.1 Introduction

Preparing for work combined with citizenship education and preparation for higher education has traditionally been considered functions of secondary education. However, conceptions regarding the meanings of these terms have been varied, and the debate on changes made in the last decade has recently been reopened.27

In the 1970s and 1980s, when it became clear that the economy’s capacity to absorb graduates from the various disciplines was in decline, discussions in the region regarding the role of preparing for work in secondary education focused on the question of the general competencies that should be provided in all disciplines and would be considered basic requirements for employability in a labour market requiring new skills and competencies, but which at the same time was diverse and unstable.

Faced with demands for higher qualifications linked to technological transformations, competitiveness, and globalization, curriculum reforms in the 1990s were directed towards proposing a broad set of general competencies considered ‘transversal’. Following a widespread trend in other regions (Briseid and Caillods, 2004), the length and obligatory nature of primary education was extended to lower secondary education. With regards to secondary education, some countries continued to divide it into two central programmes, general and technical (that is, specific training, although it also

27 Thanks are due to Florencia Finnegan for revising the Latin American initiatives and bibliography of the issues in the chapter, and to Jorgelina Sassera and Sandra Lancestremere for researching the additional data and their contributions to the editing of the text.
tended to adopt more general content – see Chapter 2). Others proposed programmes or disciplines in the broader scope of secondary education, linked more to areas of knowledge than to occupational areas of employment. This was the case in Argentina28 and Chile (Braslavsky, 2001); in some countries, technical education was even postponed until the post-secondary level (Castro, Carnoy, and Wolf, 2000).

Given widespread agreement on the importance of general competencies and skills, in this decade many arguments have reopened the debate regarding the extent to which general or academic secondary education should prepare for employment. This issue is discussed in this chapter.

Firstly, given its contribution to equal opportunities, the secondary school is, in the best of cases, the last level that the large majority of young people will have an opportunity to complete. Thus, young people enter the labour market and develop their working careers on the basis of this qualification, even though they might subsequently take up other forms of training. What is more, many are only able to follow higher education programmes if they are working at the same time. Should, therefore, ASE (academic secondary education) contribute to providing more specific tools for employment? We are not talking about skills in new technologies or a second language. Nowadays, these are transversal skills that must be included in any primary or secondary education programme. What are we talking about, then?

Obviously, hardly anyone would recommend adapting schools to meet the demands of the employment market on the basis of a presumed adaptation. Secondary education is known to have much broader social functions and cannot be reduced to being the occasional provider of human resources as required by the various inequitable, polarized employment markets.

In effect, the production world, far from being uniform, has been becoming more and more diverse (Labarca, 2004). A large part of the informal education world has been replaced by a law recommending the restructuring and integration of secondary school institutional models.

28 Following critical evaluation, the law establishing the polymodal programmes has recently been abolished; it has been replaced by a law recommending the restructuring and integration of secondary school institutional models.
sector retains traditional forms of organization, and even many formal sectors seem to require competencies polarized by occupation. Thus, one of the central questions was whether the varied nature of employment markets should be transferred to varied demands to education and whether schools should pre-establish differentiated programmes to channel young people towards such unequal labour markets (de Ibarrola, 2004). The response was to emphasize general skills at least until the end of lower secondary education. But what debates are emerging today in this respect? At least two matters have become the subject of proposals and new approaches in some countries. Could a certain ‘vocationalization’ of lower secondary education contribute to equality? In what respects should upper secondary education prepare people for employment beyond the general competencies?

As is known, these questions are not exclusive to Latin America. Some European countries include practical material in lower secondary education (Briseid and Caillods, 2004), and failure at this level has led the excessive uniformity to be queried, as in the case of the collège in France. Although figures are much lower than in Latin America, premature drop-out before completing the upper secondary level has led to “a large number of young people dropping-out from the educational system without the skills necessary to enter employment without difficulty” (European Commission, 2007).

What we are really facing are false dilemmas. Competitiveness or equality? General or specialized education? Contemporary society has clearly demonstrated that democracies are not possible without emphasis on equality. The knowledge society is making the limits between theoretical, technological, and practical knowledge more and more permeable. Educational policies, on the other hand, should actively intervene to prevent polarizing trends that propose top skills for the elite and basic competencies for the rest of the population (Jacinto, 2007).

29. As Ryan states, referring to the European Union: ‘Many of the new jobs created nowadays in the service sector are not low-tech, but no-tech’ (Ryan, 2003).
As mentioned above, the general direction taken by reforms in the 1990s was to uphold that the uncertainty of the employment market and the need for equal opportunities required attention to be paid to providing a general education of quality and a broad range of skills. Both questions were considered even more critical given the segmentation of the labour market and the difficulties faced by young people in finding decent employment in Latin American societies.

The balances of these policies at regional level highlight that “curriculum reforms have not managed to change what happens in the classroom” (Tedesco, 2004) and that there is a huge gap between the rhetoric of curricular institutional changes and the reality in schools (Jacinto and Terigi, 2007). The quantitative results for quality and internal efficiency are discouraging, as shown in this book (Di Gropello, 2006; PREAL, 2006; SITEAL, 2006).

Having recognized these difficulties, secondary education has, in recent years, been the object of much analysis and proposals to improve quality and equality. These are now reflected in educational policies. Some of these discussions have included the redefinition of the place of preparing for work in both technical and academic secondary education. This is a central question as, according to the figures, not only do more than half of young Latin Americans fail to complete secondary education, but of those that do finish, the probabilities of their successfully completing university or non-university higher education are remote (Introduction).

As regards technical education, new initiatives aim to reintegrate the institutional and curricular model and link it to a system of continuing training with certification of competencies (see other relevant chapters in this volume). The links between general or academic secondary education (ASE) and preparation for employment are now being re-assessed in a manner that might be considered half-way between general and specific vocational training. A...

---

30 In Latin America, technical education (TE) is not a final stage of education: it serves to provide access to university, as does ASE. This is not true, however, for professional training, which has almost no links to formal education. Nevertheless, ASE and TE are usually maintained in parallel, with little or no link between them.
stream of theoretical contributions and initiatives is emerging in policies that have begun to review attitudes about the meaning of ‘vocationalization’ in ASE.

This chapter examines those debates and the perspectives currently being discussed in the region regarding ASE and preparing for work, together with initiatives in this respect in public education policies in Argentina, Colombia, Uruguay, Mexico, Brazil, and Chile.31 A number of questions are tackled. Which recent reformulations uphold the idea that we are moving from a viewpoint that suggested that preparing for work in ASE was exclusively made up of training in general competencies, to proposals that also recommend the inclusion of general occupational skills and even specific competencies? Which specific initiatives of the educational policies are evidence of these changes in approach, its progress and difficulties? What are the objectives, disciplines, and levels of curriculum integration? To what extent do these measures test responses to the new complex challenges faced by Latin American youth in their search for employment?

Two final points are needed to clarify the scope of this chapter. First, it should be noted that the review of debates and policies is far from exhaustive and should therefore be viewed as an initial exploration of an issue that proposes interesting recent reformulations. Second, it is important to stress that discussion regarding the relevance of vocational technical education and the various paths of vocational training as alternatives to ASE have been left to one side. The question dealt with here refers exclusively to approaches and policies in preparing for work within ASE.

3.2 Concepts about training for employment in general secondary education in the regional debate: what are ‘employment skills’?

Two central lines of discussion in Latin America are identified in this respect.

31 The programmes and experiences, together with the majority of the bibliography used in this chapter, can be found at www.redetis.iipe-sdes.org.ar
One is the argument that the contribution of secondary education to job placement should focus on the development of general and transversal competencies and skills. This view does not offer other contributions that ASE might adopt to prepare for work—or, rather, it has other priorities. The strength of these arguments rests on agreement regarding the importance of general competencies for employment. No one disputes this.

However, some specialists maintain that the question should be reformulated to ask: Should there only be general competencies in ASE?

In effect, ‘employment skills’ in ASE are given an important place in a series of recent documents, and broad proposals are put forward regarding the implications of doing so.

Thus, vocationalization of ASE encourages the analysis of the meaning of employment in its broadest sense, not merely the technical or organizational side: from its epistemological bases to its practical applications and from the identification of possible resources for employment to the commercialization and distribution of the products derived from the work. It builds and systematizes knowledge of the changes in work processes throughout history and in different countries. It includes the study of the social relations, social differences and inequalities created around it. It relates employment to the existence of labour laws. It highlights the role of employment in civic behaviour and analyses the possibilities of technology and the differences in this respect between different societies or groups of people (de Ibarrola, 2004). To sum up, discussions go far beyond the relations between schools and enterprise and the youth employment process, highlighting the broad and complex relations between education, science and technology, production, and employment. The ethical role of the school in the training of values with respect to decent employment and fairer and more equal economic development is stressed. Questions such as respect for labour laws, non-discrimination at work, improved working conditions should also form part of school curricula.
Equal access to knowledge is another argument behind the introduction of employment skills to ASE. Camilion states that:

an egalitarian concept of education should aim to change the stratification between theoretical and practical knowledge, abolishing divisions that are reflected in the school system and in the organization of the curriculum. The so-called “new vocationalism” includes technical and academic vocational skills. There is broad agreement that both general technical and specific education should be provided as general basic education.

Learning to work. What work is. Working with others. Dealing with real work situations. The use of knowledge learnt thus assumes social significance. It helps to reduce the gap between school and work, school and social life, school, and social and labour reality (Camilioni, 2006).

This movement towards employment skills in its broadest sense has also been expressed in the idea to introduce a culture of employment into the school. According to Gómez Campos,

the objectives of the ‘working culture’ programme are broader than in technical training or occupational training. They fully transcend the area of a mere addition to the curriculum, a subject, a focal point, or an activity in the educational institution, and are installed as a transversal line in school culture. They involve the training of analytic and interpretative skills on interactions between the worlds of education and employment, as regards the increasing diversity of forms, disciplines, and opportunities for employment and personal fulfilment, opportunities for post-secondary training and education, and for the generation of new ways to work and entrepreneurship. It includes the role of the current scientific-technological revolution and the internationalization of the economy in the transformation of the employment world and occupational structure, in its negative dimensions (instability, precariousness, devaluation of educational levels and diplomas, structural unemployment), and the positive dimensions (new employment opportunities, new occupational fields, new qualification requirements, migrations, etc.) (Gómez Campos, 2006).

This includes the evaluation of the role of secondary education to provide guidance regarding the alternatives for the future in education and at work.
It is agreed that secondary education should take young people closer to the specific needs of the different sectors and the possibilities of employment, providing them with tools to enable them to embark on a path of lifelong learning and to cope with the rules of play in the employment world. One important part of this learning process is the acquisition of a technical culture (de Ibarrola, 2004) and a broad conception of what ‘work’ is, including the different forms it may take: occupational work, recreational work, domestic work, and social work (Camilioni, 2006).

Another line of debate on how to move from a general programme to the introduction of employment skills in ASE includes the diversification of institutional and curricular models, and its relation to equal opportunities.

In a recent paper, Colombian authors posed the question in the following way:

No one denies the need for a basic core followed by specialized education. Those who defend the general nature of the programme claim that the level of general competencies and conceptual, affective and social preparation for life attained in primary education is very low. Therefore this must be completed in secondary education before tackling differentiated education with respect to employment. However, those who defend its specific nature claim that an exaggerated extension of general competencies produces a high number of baccalaureate students who do not know how to do anything. (Lucio and Oro, 2006).

Given the risk of this happening, the opposite has also been suggested – that is, that institutional uniformity can be a factor of inequality. To offer everyone, in the name of equality, the same content and the same benefits and to adopt identical pedagogical strategies is equivalent to favouring a formal, theoretical equality as opposed to a true equality (Caillods and Hutchinson, 2001). Thus, many are in agreement with respect to the benefits of diversifying structures as a tool for promoting greater equality (Braslavsky, 2001).32

32. The European Union has moved in the same direction, tending towards an institutional diversification of upper secondary education, with multiple bridges between the different structures (Niemeyer, 2006).
However, the questions of institutional uniformity or of a single curriculum do not appear to be the central factors associated with equal opportunities at secondary level. The broadest aims of the structure of the education system and employment market are given more importance. Among these, it is important to establish how each social group is progressing in the education system, what each group has access to with respect to quality, and what extent of segmentation there is in the employment market (Jacinto, 2007; Morch et al., 2002)?

Following the same lines that support institutional and curricular options and diversification, it has been suggested that what is needed is a different understanding of ‘educational time’. Students, particularly young people, can no longer dedicate a period of their youth exclusively to schooling. Distance education and improved access to knowledge via the Internet confirm the need for a different understanding not only of time but also of educational capacity (de Ibarrola, 2004).

In short, as indicated by Acevedo (2000), the opposition between general training and specialized training is part of a false debate regarding the extent to which it is possible to have training in general competencies without specific competencies, and vice-versa. But the problem is even greater. In an analysis of the trends in developed countries, Moura Castro, Carnoy and Wolf (2000) state:

In all cases, there is the need to make theory more applied, more concrete, more focused on solving problems, rather than being the memorization of facts and theories. Notice that being practical is not the same as being vocational and one of the new tendencies is to make academic education practical and concrete but not vocational. This is true both for academic and vocational education, as academic needs practical applications and vocational needs stronger theoretical foundations (www.iadb.org/sds/doc/EDU-112E.pdf).

Along the same lines, Camilioni (2006) proposes a new form of scientific–technical training in secondary schools, instead of the existing division between an academic discipline (which, he claims is ‘academic
Recent trends in technical education in Latin America

and intellectual’) and a technical discipline with low social and educational status and with huge deficiencies in quality and relevance. The objective can be achieved through the diversification and detailed examination of the areas of knowledge studied at secondary level. The teaching requires and stimulates pedagogical options offering greater independence to the student, teaching through projects, opportunities for experimentation, problem solving, coordination between theory and practice, and independent study. In this respect, Gallart (2006) identifies certain elements that may be considered the pedagogical contribution of the technical school for training for employment in its broadest sense: (a) the workshop and laboratory favour coordination of teaching and encourage problem-solving skills; (b) reflection on the practical, the identification of the necessary skills for developing a task, and also the scope of each occupational profile; (c) the integrated teaching of new technologies; (d) contribution to motivating young people, and, lastly, (e) improving coexistence and respect for the standards of basic behaviour in order to teach and to learn. We need, therefore, to reflect upon how to bring back certain aspects of technical training to all secondary education.

In this framework, the new broader conceptions of the introduction of employment skills in schools, are organized along at least two major lines: (a) to place ‘working’ and its ethical, political, economic, social, technical, and subjective interests as an object of knowledge and development of competencies with significant intentions in the school curriculum, and (b) to call upon institutional and curricular diversification to provide access to options, among other areas, with respect to employment skills.

There is still a long way to go before the division between general knowledge and specific knowledge, technical education, and general secondary or academic education is narrowed in Latin America. Nevertheless, the existence of those views, which offer a new viewpoint on employment skills in secondary education, has begun to be reflected in specific forms taken by certain initiatives of educational policies in recent years. These are discussed below.
3.3 Redefining the ancient dilemma between general and specific academic secondary education

The renewal of approaches to training for employment in ASE has assumed different nuances from those in the 1990s. As mentioned above, in the 1990s, faced with major transformations in employment markets and the introduction of new computer and communication technologies, it was generally agreed in the region that new demands required greater emphasis to be given to general competencies, and that training in these competencies led to ‘better training for employment’. Computer skills and a second language were included in these general competencies. Without questioning these views, the perspective was moving from the general towards the detailed. Several of the existing policies in countries in the region also recommend occupational competency training as part of the ASE programmes. Not only are general competencies highlighted in an undifferentiated way, as was the case in the 1990s, but the development of ‘general and specific employment competencies’ is also being promoted in ASE. Thus the idea that training for work in secondary education only concerns technical schools is gradually being superseded, as has happened in the European system (Briseid and Caillods, 2004).

The aim is not only to strengthen the vocational qualification obtained by students, but also to contribute to improving retention and completion levels. In effect, the basic principles highlight that the introduction of general and specific employment skills could lead to a strategy for motivating young people and help to restore the ‘lost sense’ of secondary education. In addition, this new viewpoint is based on disillusion with the results of the reforms of the 1990s and with the fact that the growth in the number of secondary-level students was combined with high rates of repetition and drop-out, and low graduate levels (Finnegan, 2006b). Thus, concern to provide employment competencies (whether general or specific) in ASE is related to recovering relevance. Some examples are given below.

In Colombia, since 2002, the coordination of secondary education with training for employment has received a new boost, not only with
the objective of improving citizen qualifications and employability, but also with the aim of favouring alternatives for the continuity of secondary education and higher education, combined with flexible and modular formats of educational attention that permit inputs and outputs in accordance with the possibilities of young people (Finnegan, 2006a). In this context, the project ‘Occupational Competencies, Training for Employment and the Relevance of Secondary Education’, introduced by the Ministry of Education, aimed to provide tenth- and eleventh-grade students in official and private institutions with the opportunity of obtaining general and specific occupational competencies through agreements between educational institutions and the business sector. This serves to promote the inclusion of this objective in the ‘institutional educational project’, through a number of activities. Emphasis on entrepreneurship and the provision of profitable educational practices is also seen as a means to increase enrolment and the retention of students at secondary level in contrast to the existing low admission levels and high drop-out rates (Box 1).

In addition to training in general occupational competencies, the proposal also recommends the inclusion of specific occupational competencies for all students. Previously, these were only included in technical secondary education programmes. In particular, the students’ requirements should be considered, aiming training at those students with a more defined professional vocation and those needing to find a job early on. In any case, the need to avoid early specialization was highlighted, as this leads to the social segmentation of programmes and makes continuity to higher level studies more difficult. Training may take place within the educational institution or outside the school after school hours. In all cases it should have an accredited modular curriculum organization. The programmes should be recognized as equivalent to those offered under the National Training Service (SENA) in order to enhance double certification: the full secondary education certificate awarded by the school and the technical secondary certificate awarded by SENA or their authorized institutions. This guarantees a certified technical training rather
than the so-called ‘light vocationalization’\textsuperscript{33} (Lauglo, 2006). Nevertheless, the fact that training would be outside school hours could well discourage students needing to work from continuing with occupational training.

\textbf{Box 1. General occupational competencies – methodological path for inclusion in the secondary education curriculum: the case of Bogotá}

This programme links training for employment in public secondary schools with academic disciplines, planning political objectives (city–region) with the requirements of the new employment structure. The inclusion of general occupational competencies in public schools in Bogotá is the product of support provided by the Secretariat of Education and Corpoeducación to 45 institutions in 2003. It includes a project that analyses the use of occupational competencies and secondary education.

This objective was to adapt education to the changes in the economy and production systems, responding to the political commitments of the city to other territorial bodies and public institutions (Bogota Strategic Plan, 2000).

The general occupational competencies included in the secondary education curriculum “are those required for any job to be correctly performed, and specific tasks learned, irrespective of the economic sector or the rank of the job”. These skills can be divided into four groups: (a) intellectual; (b) interpersonal; (c) organizational; (d) personal.

This support has led to the inclusion of competencies in the curriculum and identified a strategy for establishing practices and co-existence in the classroom based on transversal projects.


\textsuperscript{33} This refers to the strategy of adding certain professional training modules to secondary education. Lauglo compares three African countries (Ghana, Kenya, Botswana), which, in the 1990s, decided to promote vocationalized education. This was understood to mean education in which the general or academic curriculum was maintained as the central core, and vocational or practical subjects were introduced (10–15% of daily timetable), thus permitting studies at higher academic levels to be continued. The main objective of including practical content was to prepare students for a professional family occupation or for the employment market. However, it was concluded that the programme objectives were not achieved, given the institutional and curricular conditions.
The Colombian Minister of Education introduced training for teams from the territorial Secretariats of Education, and from educational establishments. Schools had to reformulate study plans and programmes and institutional organization schemes. As expected, as far as numbers are concerned, the achievement level of the policy to link secondary education to the labour market was significantly higher in technical schools. Training and accreditation agreements with SENA in technical schools reached 88.02% of the target for the four-year period (1,712 schools involved, for a target of 1,945 for the four-year period). On the one hand, technical schools were more open to this policy, while on the other hand, they already had the institutional resources and knowledge required to allow them to put the policy into practice more easily.

Mexico is another Latin American country that has adopted the competency-based approach for curricular reform at the upper secondary level. The Vision for 2025 of the National Education Programme 2001–2006 establishes that:

study plans and programmes shall be flexible to permit student mobility, and shall be regularly updated as established by internationally accepted parameters for knowledge and competencies. Relevance shall be sustained by the close links between the school and its community, by inter-relations with the labour market, and in local, federal and national sustainable development plans (SEP, 2001).

The policy includes training for employment for the entire programme. The new curricular organization defines three elements of training common to all the programmes: basic, directed at achieving advanced humanist, technical and scientific training that develops problem-solving skills, the ability to express oneself and to participate in collective activities, and lifelong learning processes; preparatory, directed at obtaining the necessary education to go on to the next level and vocational training according to the

---

34. Note that educational institutions enjoy a certain level of independence with respect to the establishment of study plans, provided these are in line with the central curriculum parameters and those of the territorial bodies to which they belong.
dynamics of the production sectors, aimed at employability in the labour market in accordance with the occupational competencies approach, with the corresponding content and practice, and encouraging educational practice in the social sector and in businesses. As part of the integral programme for the institutional strengthening of upper secondary education, started in 2004, in the case of the general baccalaureate, the aim of curricular reform was to focus on educational approaches based on training and to progressively include occupational competency standards in training for employment.\textsuperscript{35} The proposal was introduced gradually, with the establishment of 70 schools as ‘guide schools’. The new programmes were administrated at these schools as a specific device for monitoring and evaluating the innovation. After they had been validated, the newly updated programmes were introduced to the remaining schools. As a strategic initiative for the reform, the programme required the drafting of a macro proposal for the training and updating of upper secondary education teachers “to include the latest advances in humanities, science, technology and pedagogical and teaching for training based education and for occupational competency-based training” (Finnegan, 2006b.)

Brazil has also recently promoted the concept of secondary education in the context of the labour market and citizenship education. A core aspect of this approach is the relation between the practical, understood as production processes, and the theoretical, with a scientific and technological base. Thus, basic training for employment is justified due to its value in terms of the preparation it provides to young people for coping with modern life, specifically through the understanding of technology and production processes. As described below, the Professionalized Brazil Programme is a major step forward in this direction.

Specific actions taken as part of these policies are discussed below.

\textsuperscript{35} SEP, (Cuarto) Informe de Labores, 1 September 2004. The modification of study programmes corresponding to basic training was expected to be completed towards the end of the 2004/2005 school year.
3.4 Mechanisms for approaching the world of employment in academic secondary schools

A recent study has identified specific mechanisms used in secondary schools with the aim of bringing the world of employment closer to young people (Jacinto and Terigi, 2007), without necessarily requiring the development of technical training. The practical content identified particularly indicates the following paths: (a) the organization of apprenticeships or vocational practical training; (b) the organization of production entrepreneurships, supporting and/or at the service of young people and/or training to promote the development of ‘entrepreneurialism’; (c) variants of social and educational programmes; and (d) coordination of ASE with vocational training.

Apprenticeships: building bridges to the world of employment

Apprenticeships or practical training are usually a privileged mechanism for approaching the world of employment (Jacinto and Millenaar, 2007). Many studies and authors in different contexts have stressed that the most efficient way of teaching theory, formal techniques, and skills is ‘in context’ (Ryan, 2003; Moura Castro et al., 2000). Given that some competencies can only be learnt ‘on the job’, together with concern for the high youth unemployment rate, work experience has become increasingly significant in the European context (Caillods, 2004). In a recent document, the European Commission (2007) maintained that the establishment of early links between education and the labour market is essential to familiarize young people with the world of employment. Practical experience, when related to a training or study plan, is an important tool in this respect. However, it has been stressed that poorly paid or unpaid practical experience or experience with little added educational value must be avoided.

In Latin America, apprenticeships were first introduced to vocational training colleges. In the 1990s, several youth occupational training programmes were made obligatory (Lasida, 2004). In secondary education, apprenticeships were mainly linked to the establishment of dual models in
technical education even though they were not highly developed in the region, except more recently in some countries.

Based on the experience of how the training content of apprenticeships is often modified, Latin American specialists have cautiously stressed that apprenticeships are complementary to training in school environments. Schools do not always have the resources required to provide the necessary training or the opportunities for incorporating updates on technological and production progress at the rate they occur in business. They also offer students the opportunity to combine their theoretical knowledge and practical training. In addition, the new skills and competencies required by workers include attitudinal and training skills that can only be offered as a part of socialization at the workplace (de Ibarrola, 2004; Gallart, 2004).

Almost all the countries in the region include apprenticeships or practical training at secondary level (including Argentina, Chile, Uruguay, Brazil, and Colombia). Some countries (the last three) have also developed specific national regulations in the last decade.

The development of legislation in this respect is based on the need to provide a legal framework for these mechanisms to give them some structure and to protect these students. A number of problems may occur when apprenticeships are not incorporated correctly into training programmes. These include the substitution of workers by apprentices, low training content, lack of monitoring and supervision by educational bodies and businesses, and limited transparency in the apprenticeship plan (Jacinto, 2006a). Laws and/or regulations in this respect demand that apprenticeships assume a technical–teaching role and do not constitute employment, but are mechanisms for complementing training in specific working spaces. These laws establish the length and legal coverage of apprenticeships and specify the nature of the link between school and enterprise, together with the procedures to be followed.
However, apprenticeships appear to be particularly linked to technical education policies in Argentina, Chile, and Uruguay. However, of the countries examined, at the start of this century Brazil and Colombia had developed legislation to include the possibility of apprenticeships for ASE students. Moreover, both countries also include, in addition to apprenticeships in business, the option of apprenticeships in public, national, regional, and municipal organizations, non-governmental organizations, and social services. This serves to guarantee the relevance and usefulness of the curricular programmes and to offer varied practical training to students.

For example, in Brazil, the Ministry of Education and Science has introduced a policy to actively control the nature and characteristics of apprenticeships (estagios) in vocational training and, more generally, in secondary education. Apprenticeships are considered to be educational, forming part of the curriculum and requiring supervision by the school. They are designed for regular students and are closely linked to the training objectives of the study plan, in addition to providing effective opportunities for participating in real-life situations at work in a social and productive context. They should be planned and implemented to coordinate with simulated vocational practical experience carried out in school laboratories, workshops or other areas, without either one replacing the other (Finnegan, 2006b). The regulation recognizes different types of supervised apprenticeship forming part of the curriculum:

- **compulsory vocational apprenticeship**: required to obtain the vocational certificate, according to graduate profile;
- **non-compulsory vocational apprenticeship**: included in the programme at the decision of the school, making it obligatory for students, but not required to obtain a vocational certificate;
- **social-cultural or introductory scientific apprenticeship**: established as compulsory by the establishment according to its training value in terms

36. The fact that regulations are directed particularly towards technical schools does not prevent some ASE schools, on their own initiative, from proposing apprenticeships for their own students.
of relevance to the curriculum and citizenship education or training for employment or as an extension activity;

- **vocational social-cultural or introductory scientific apprenticeship**: not included in the school teaching programme and therefore optional, although assumed by the school at the proposal of the students or organizations in the community given its potential to provide training in labour and civic competencies;

- **Citizenship apprenticeship**: refers to the participation of students in community initiatives of social or cultural interest, in civil defence or service systems, or on volunteer projects, provided that these are non-profit-making.

In Colombia, vocational–educational practical programmes are a pedagogical strategy that must be included in training programmes. In order to encourage businesses to take on apprentices, a national regulation establishes a minimum quota of ‘apprenticeships’ that must be filled to avoid payment of equivalent costs or sanctions. Training programmes developed as part of this regulation require practical training within and outside the schools as an obligatory part of the programme. Therefore, and to ensure that the programmes are relevant to the demands of the labour market, the policy requires the drafting of plans for improving training that include the building of alliances with organizations from the production sector, preferably businesses (Finnegan, 2006b).

On the whole, the regulations recommend the intervention of multiple actors in defining these links, including national and decentralized educational systems and the schools themselves. In some countries, other actors, including chambers of commerce, employers’ associations, guilds, trades unions, and civil society organizations are also active in promoting these links. For example, in Brazil, a national non-governmental organization (NGO) with 42 years of experience, the Centro de Integração Empresa Escola, founded by businesses and educators, promotes apprenticeships aimed at secondary-level students. The organization provides information, provides a link between young people, business, and schools, and aims to guarantee compliance with
Recent trends in technical education in Latin America

legislation. The database lists 28,114 businesses, and 20,661 educational establishments, offering 7,722 opportunities for apprenticeship. In Argentina, the Argentina Business Association has promoted a plan to support business and schools in organizing these links, and has designed supportive material. Some NGOs also develop programmes relating to the world of employment that include apprenticeships in secondary schools, such as Fe y Alegría at regional level, UNICEF, the SES Foundation, and the Forge Foundation in Argentina.

These mechanisms have been little studied and face numerous challenges, given the lack of an ‘apprenticeship culture’ in national traditions, which ensures the clarity of objectives and strategies to the actors in the worlds of education and employment (Jacinto and Terigi, 2007). The information available is the result of specific studies of school initiatives and not of evaluations of large-scale national initiatives, which are only just beginning. Studies indicate that practical experience usually helps to motivate young people, although it requires careful planning and monitoring by schools. Without this, the educational objectives and the reason for apprenticeships are lost. Another key factor is the curricular coordination of the apprenticeship that requires the allocation of adequate mechanisms and figures for successful implementation. Although these are widely valued and defended by the schools promoting them, they tend to generate excess work for the responsible head teachers and supervising teachers (Jacinto and Millenaar, 2007). The need to establish a constant and fluent dialogue with businesses, the administrative tasks required by agreements and contracts, the continuous monitoring of the students concerned, all involve extra work. There is an obvious need for permanent local or regional figures to guarantee the continuity of the link and to take on the work of setting up, implementing, and evaluating the agreements between schools and business.

The development of policies that promote curriculum coordination and the general introduction of apprenticeships to secondary education, whether technical or ASE, will undoubtedly encounter numerous organizational and curricular challenges. It will be of great interest to monitor and evaluate these.
Educational–vocational guidance: a subject pending

Numerous studies have stressed the importance of educational establishments providing guidance at secondary level (de Ibarrola, 2004; Tedesco, 2004). However, public policies in secondary education are only just beginning to include advisory services to students prior to graduation (Gómez Campos, 2006; Jacinto, 2007). Private education, however, is usually able to offer this type of service.

The question of careers guidance is of special significance in the secondary education reforms in Europe (Briseid and Caillods, 2004). It is included in the most recent recommendations in the sense that:

- educational establishments and the labour market must step up efforts to offer all young people guidance and advice adapted to enabling them to select an appropriate educational career leading to an occupational qualification, thus reducing the imbalance between teaching and the requirements of the labour market (European Commission, 2007).

This advisory service, in view of the many uncertainties surrounding entrance to the job market, is closely linked to the function of education not only with respect to employment but also as regards social inclusion and equal opportunities in education. In effect, guidance and the development of different interests appear to be a concession reserved for the more privileged sectors. The social, cultural, and material capital of these sectors enables them to look at different forms of occupation and training, selecting the most suitable for their interests and expectations. However, less privileged young people do not have this opportunity, as schools – practically the only place that might do so – do not offer this service (Gómez Campos, 2006; Jacinto, 2007).

The more innovative proposals in this respect usually support a view that goes beyond mere ‘career guidance’ (Jacinto, 2007). They recommend backing for educational and occupational guidance that offers young people tools to build their educational and occupational strategies on the basis of their interests and potential, providing them with better information about
Recent trends in technical education in Latin America

social and work environments and post-secondary education. Available information about changes in post-secondary degree choices and drop-out rates in upper secondary education clearly demonstrate the contribution that careers guidance could make at secondary schools (Fanelli, 2005; Caillods, 2004). An advisory service towards the end of secondary education would help to develop the ability to establish relations between personal interests, different work opportunities, and the alternatives on offer in formal and non-formal education. It would provide information about workers’ rights and duties, particularly with respect to employment market legislation, encouraging critical reflection of the labour market.

Two examples of public policies in secondary education have been identified in the countries examined. Chile, through the Chilecalifica Programme, has set up a Careers Guidance Service that has led to the renewal of the advisory service in secondary education. The programme proposes improving the conditions and inputs required to help young people and adults to make the right decision with respect to their education and occupational training. This has included, since 2003, the financing of careers guidance plans at institutional level, which closely link educational options to the information available about the labour market and which generate strategic networks of advisors with other social and production, communal, and public and private service organizations and actors throughout the country (Box 2).

In Colombia, a number of district initiatives have been developed as part of the programme ‘Secondary Education with Emphasis on Vocational Training’. These range from broad coverage to offering an introduction to ‘working culture’ (Gómez Campos, 2006).

Some initiatives can be seen in the other countries examined, but, although interesting, they are of limited scope with respect to ASE. In some cases, institutions outside the secondary school, such as universities, NGOs, or international bodies offer advisory services. For example, in Argentina the University of Buenos Aires and the Forge Foundation develop programmes with schools. A recent regional programme, Promotion of Youth Employment in Latin America, set up by the International Labour Organisation (ILO) and
covering several countries, also offers support in this respect. Hence, the
inclusion of careers guidance mechanisms in public education policies in the
region is still a subject to be developed. As with other strategies to develop
employment competencies, the introduction of these mechanisms faces a
number of organizational and curricular challenges, including the definition
of an appropriate curriculum designed to this effect and the adequate training
of responsible teachers.

Box 2. The Chilecalifica Careers and Labour Guidance Programme

The Chilecalifica Careers and Labour Guidance Programme aims to develop a system of
information for education and lifelong training, occupational mobility, and vocational advice. A key factor has been the voluntary organization of establishments into networks. Advisors are also highly motivated to take part in the preparation and implementation of careers guidance plans.

A careers and labour guidance plan is an innovative measure. The objective is to offer students support in their educational and vocational development, provided by a network of educational establishments operating in subsidized colleges belonging to the same commune or in the same area.

Students benefit from the impact of the improvement in the quality of information to assist young people making vocational and employment decisions, offering students more opportunities to discover their interests and skills, and guiding these interests and skills towards post-secondary training. Advisors and teachers also benefit, as their role is reinforced and focused, and from the exchange of experiences, methodologies, and technical material with the colleges in their network. In addition, parents and guardians have access to greater dialogue, communication, and information about the training and growth processes their children will experience as they go through college. Lastly, colleges serve to optimize the institutional management of the guidance service. Communal guidance resource centres have been set up, and guidance plans have been included in the annual plans of the colleges, in addition to developing a graduate monitoring system.

Source: http://biobio.chilecalifica.cl/index.php?option=com_content&task=view&id=21&Itemi d=143
General secondary education and vocational training

Another way to link the world of employment to general secondary education is by coordinating with vocational training. (This does not refer to the replacement of ASE by vocational training, but to a linking of the two.) This has already been mentioned in some current initiatives, especially in Colombia.

This combined mode is directly aimed at training in specific occupational competencies. The right time for including this type of vocational training is, however, being debated. This question is in fact part of the broader debate regarding whether specialization in technical education should begin in lower or in upper secondary education. Over the last 15 years, educational policies in the region have tended to leave specialization until upper secondary level, for the reasons given above.

Those in favour usually base their arguments on the contribution to continuity of studies. For example, Ryan (2003) points out that the introduction of vocational training at basic secondary level is viewed as a way to increase motivation and improve the achievements of students facing problems. Vocational training options are assumed to encourage young people to continue their studies, even where these studies are academic. In addition, Lauglo (2006) maintains that young people view a vocational content combined with an adequate academic content (in order to be able to continue academic studies) favourably, but in well-equipped schools. However, there are also many arguments against, as indicated above (Caillods and Hutchinson, 2001; World Bank, 2005).

In the region, there are those in favour of early specialization (Pieck, 2007), suggesting that “early specialization is justified in marginalized contexts because young people are forced to leave school early on in order to contribute to the household income. It is useful for these students to acquire technical skills before leaving school, especially those relating to life and employment.” Therefore, early specialization is usually directed at students from poverty, rural, or urban sectors. Two arguments, described above, support
the early inclusion of vocational training: the need to provide adolescents required to enter the world of employment in the near future with useful skills, and the motivation resulting from this practical training.

There are several examples of this type of experience in Latin America, particularly aimed at rural populations. The telesecondary schools, linked to the Community–TVC, are an innovative educational model within the rural telesecondary programme (for young people between 12 and 15 years of age) introduced almost 12 years ago in Mexico. This programme operates in 14 schools in a specific region in Mexico. The aim is to encourage young people to settle in their community, to offer an education adapted to the profile of young people in rural environments, to encourage a critical outlook, and to develop social and employment-based competencies by involving students in different production workshops. The programme develops the following components: (a) alternation between education and production; (b) connection between the school and the community; (c) focus on language as a whole (for example, verbal and corporal); (d) generation of knowledge (learning through project-based research); (e) concept of the school as an educational community; (f) development of social know-how. A distinctive characteristic of TVC is the fact that it operates within the formal education system although it is a different and relatively independent model.

Evaluation of these experiences notes that production workshops generate motivation and satisfaction to young people. Employment-related education leads to links between theoretical content in the areas of general training and practical activities. This type of programme improves the development of reading, writing, and mathematics and widens the range of languages to which young people have access. It encourages an investigative, reflexive, and critical attitude and a community spirit. (Pieck, 2007). Nevertheless, even those who are in favour of early specialization stress that it should include quality experiences. For example, the results of a study carried out by the same author (Pieck, 2005) in lower technical secondary schools in Mexico
revealed the precarious nature of the situation, with low placement levels and dropout in technology subjects. To what extent does technical secondary education really prepare students for employment? The study concluded that the necessary support must be provided.\(^{37}\) The *Fe y Alegría* schools are another example of specific training at regional level, which are part of more comprehensive model.

Other initiatives recommend the provision of vocational training outside school hours, as, for example, the ‘*Escola Fábrica*’ (factory school) in Brazil. This programme offers initial and ongoing vocational training to young people with limited resources by means of courses taught in classrooms operating in urban or rural production facilities. The programme aims to provide the young person with access to social and occupational training. The programme is directed at young people between 16 and 24 years of age from families with monthly incomes equal to or less than one and a half minimum wage. The student should be enrolled in regular primary education at a public centre or on any of the youth and adult education programmes, with priority given to secondary education. The beneficiary of the programme receives an ‘incentive’ (*bolsa de auxilio*) of US$81 per month for the duration of the course, which lasts for 6–12 months. The programme is administered by the National Fund for the Development of Education. Since 2005, the Ministry of Education has invested approximately US$20 million per year in this programme. In 2008, an estimated 3,000 young people with limited resources benefited from 154 courses.

More recently, the Brazilian government has created a more widespread initiative. The ‘*Brasil Profesionalizante*’ programme aims to create a new model of secondary education, which combines general, scientific, and cultural training with vocational training. In 2008, US$120,689,655 was allocated to the programme. The goal is to provide training for 800,000 students, to train 14,000 teachers, and to construct 2,500 laboratories. It is interesting to note that one objective of the programme is to link schools to local and regional

\(^{37}\) Similar conclusions were reached in a study carried out in Africa. Lauglo (2006).
production sectors in order to include them in the local economic development. It also seeks to increase levels of secondary education enrolment and to encourage young people and adults to return to school. The programme offers financial aid to selected proposals. It has become one of the most relevant initiatives in the region with respect to the creation of vocational training as a strategy linked to secondary education and its place in local development, and as a means of encouraging enrolment in schools.

As the majority of the measures have only recently been introduced, systematic studies have not provided much information regarding whether or not the inclusion of coordinated vocational training leads to specific solid competencies. However, qualitative studies highlight that vocational training and learning strategies directed at poorer students lead to higher motivation among adolescents and are considered efficient strategies to help to prevent school drop-out. Some examples of good retention results are listed below. These include a programme in Argentina supported by UNICEF (the ‘Desafío’ project), and several other programmes developed by NGOs in coordination with secondary schools. The Fe y Alegría experience (Box 3) is another example.

Obviously, there is a risk of degraded learning as a result of traditional and limited vocational training, without adequate human resources and equipment (Lauglo, 2006). Beyond this, the trend of closing technical and vocational training to general secondary education, particularly upper secondary education, is important in Europe and other parts of the world, in the sense of strengthening a training model with multiple bridges and lifelong learning. Some of the Latin American experiences above have similar intentions, although there is a long way to go before they are truly consolidated.
Box 3. The Fe y Alegría experience

*Fe y Alegría* is an International Movement of Integral Popular Education and Social Promotion. Its activities are directed at the most excluded sectors of the population, based on Christian values of fairness, participation, and solidarity.

The *Fe y Alegría* Schools Programme has been introduced in 13 countries (Venezuela, Ecuador, Panama, Peru, Bolivia, El Salvador, Colombia, Nicaragua, Guatemala, Brazil, the Dominican Republic, Paraguay, and Argentina) and involves 17,000 teachers. It is directed, in its different disciplines, at students enrolled in formal primary education and secondary education. Since it was first launched in 1955, the programme has reached more than one million students. It aims to offer formal and non-formal education to socially marginalized children, young people, and adults in a number of countries in Latin America, with the participation of the local community, the support of private organizations, and based on agreements with the different states.

Measures developed by the *Fe y Alegría* schools include: the creation of a network of basic and vocational, agricultural, and technical schools, community education centres, recreational camps, youth training, and practical job training; the development of distance education by radio; the introduction of continuous teacher training programmes; the preparation of educational materials for teachers and communities, and students’ text books.

The job training programme develops formal and non-formal programmes of education. The former includes experiences ranging from basic preparation for work and pre-vocational education in the last two grades of primary school to the upper technological level. Some countries have focused on primary education programmes (Guatemala, El Salvador, Paraguay). Others, including Peru, have concentrated their efforts on secondary education. Bolivia, on the other hand, has succeeded in defining graduate profiles in technical education. The organization also develops technical education programmes at upper secondary and non-university level (Bolivia) and university level (Peru and Venezuela). In addition, it has introduced alternative experiences to include job training in extra-curricular programmes.

Broadly speaking, all the job training programmes develop apprenticeships, which not only help participants to gain experience, but are also of considerable institutional wealth, as they enable coordination with production sectors and their needs. The development of these programmes has also incorporated the occupational skills concept.
3.5 Generation of entrepreneurial competencies

These are the programmes directed at the promotion of an entrepreneurial culture among students. These programmes consider several aspects of concern. On the one hand, the increase of unemployment and changes of employment conditions have served to highlight the search for other job placement alternatives for young people. Self-employment or small enterprises are one alternative, reflected in the broad informal sector in Latin America. On the other hand, the relationship young people have with work tends to push many young people towards self-employment, which offers them greater freedom and in some cases is even better paid. In effect, some young people from middle-class sectors of the population choose jobs that, although flexible and unstable, are motivating. The so-called ‘independent second-generation jobs’ – for example, in computing – are often carried out by highly qualified young people who choose this job and who receive symbolic monetary payment for the work. Much self-employed work, for example, in the field of management and/or cultural expression, is valued by young people (Jacinto and Solla, 2005). Lastly, another significant argument behind these programmes is that ‘entrepreneurship’ is a transversal skill, useful in providing life skills and for any type of job placement.

In any case, the objective is not simply for young people to hold on to the enterprises that they create, but to provide them with the experience necessary to create and run a business so that they acquire entrepreneurial competencies that can be used in the future (Lasida, 2004).

In many cases, the job methodology includes the preparation of trainers (often teachers), who then teach the students values, attitudes, skills, and knowledge to enable them to identify ideas and opportunities for business, to evaluate these ideas, and to make decisions. The aim is to develop entrepreneurial skills and tools, and to establish business plans and business simulations. In this way, students take part in all the stages of a specific production experience: efficient design, management, planning, administration of resources, marketing, production, and process evaluation.
These simulated enterprises enable students to integrate and put into practice a cumulus of knowledge acquired in different areas and, at the same time, learn specific procedures (‘know-how’) applicable in the employment world, which would otherwise not be covered in school (Jacinto and Freytes, 2004). As has been seen in other areas of the world, the development of a specific project is usually considered a key component of pedagogical strategy (Singh, 2008). For example, the European Union has recommended the teaching of entrepreneurship as a key competency and supports the improvement of conditions for young entrepreneurs. This includes the Business and Innovation Initiative programme between businesses and financial institutions, which offers young entrepreneurs access to financing for the creation of small and medium-sized enterprises (European Commission, 2007). A total of 82 programmes have been identified in 24 European countries. More than half of the programmes are promoted by organizations that belong to some type of network, in particular Junior Achievement – Young Enterprise Europe (26 programmes) and EUROPEAN (17 programmes) (European Commission DG, 2005).

The backing for entrepreneurship is present in initiatives in a number of the countries considered. Generally, they all have national sections linked to the subject area and specific programmes (such as Junior Achievement, Entra 21). Colombia is perhaps the country that has given most curricular relevance to the subject, introducing a national law for the Development of Entrepreneurial Culture, which establishes training in business competencies, together with basic, civic, and occupational competencies, and incorporates a transversal subject of entrepreneurship at all levels of education.

As in the above strategies, quality and good organization of these types of experiences largely depend upon the framework and support of education and training policies, on institutional conditions, and on the satisfactory resolution of the inevitable tension between production rationale and educational rationale (de Ibarrola and Gallart, 1994).
A recent evaluation of an entrepreneurial development programme carried out in secondary schools in Chile for some years (Minkner-Bünjer, 2007) brings to light some of the lessons and difficulties of this type of programme. This is particularly the case when they transcend the objective of ‘developing an entrepreneurial way of thinking’ and are aimed at some entrepreneurs supporting themselves. The positive results are particularly related to the non-compulsory participation of students, with the methodology and modern teaching methods, with ‘auto-control’ of conflictive situations by students, and with the precision and commitment of all those involved, especially the facilitators and participants. The difficulties are related to the low levels of motivation among school heads and teachers. This has resulted in the programme obtaining support from external facilitators with little curriculum coordination. In addition, the programme was considered to be out of tune with the real (rather than those planned or formulated under the regional strategy) development priorities of the regional government.

Sometimes, even outside the framework of the ‘promotion of entrepreneurial culture’, the development of production or service projects was promoted, as a means of integrating content and attracting young people from a pedagogical strategy that goes from practical to theoretical: for example, projects such as the installation of an institutional or neighbourhood radio, the offer of maintenance services to other schools, or the organization of teams of young people to promote community health. A study in Argentina (Jacinto and Freytes, 2004) has observed that interest and sustainability of this type of proposal largely depends on its how far it is integrated into the establishment’s plans and whether institutional conditions favour it. These projects face many challenges, the institutional resolution of which should be supported by policies: curriculum coordination, organization of times within and outside school, and the profiles of the teachers responsible.

3.6 Conclusions
The information in this chapter appears to suggest that the region (or at least some of the central countries) is moving away from the idea that training for
work in ASE consists exclusively in training in general competencies and knowledge, towards proposals that include general job skills and even specific competencies at this level.

In some countries, the development of general and/or specific labour competencies in ASE has gone beyond the institutional initiative stage of the schools themselves or of specific programmes, to become part of regular secondary education policies. This seems to be a significant change of perspective with respect to the academic model of secondary education.

A number of concerns revising the propositions of the 1990s have led to arguments about why this reformulation is occurring. Not only are the ‘major’ technological transformations, globalization, and the opening of markets emphasized, but the complexities and tensions of diverse and segmented labour markets as is the case of the Latin American’s together with conflictive demands to education are also highlighted. With this emphasis on diagnoses, proposals suggesting that only general competencies need be developed in ASE tended to be queried, given current social and market requirements.

A number of opinions justified the reformulation on the side of educational arguments. On the one hand, approaches to secondary education were fostered that tried to overcome the divide between general and specific knowledge, proposing an integration of skills. As stated in the 2001 Law for Education in Brazil: “The ongoing disputes between vocational and academic approaches, between humanist or economic objectives, represent a tension that expresses privileges and exclusions of a social origin. In view of this, the secondary education proposed in this plan must face the challenge of this duality by providing quality secondary education for everyone.” However, the search for better quality secondary education encourages the elimination of the isolated school. It considers the different cultures, motivation, and interests of young people, together with unequal family backgrounds, to support the democratization of the system proposing greater institutional and curricular diversification. This requires the development of measures that overcome rather than increase the segmentation of the education system as a whole. Arguments have been put forward to improve efficiency, moving towards
the creation of curricula that integrates general and technical education (di Gropello, 2006).

In this framework, and as seen above, the broad conceptions about the introduction of employment skills in schools are organized along at least two major lines: (a) to give ‘work’ and its ethical, political, economic, social, technological, and subjective interests as an object of knowledge and development of competencies a firm place in the school curriculum (in all ASEs); and (b) to provide mechanisms and options that facilitate the development of both general employment and specific skills in ASE.

Which specific initiatives of the educational policies are evidence of these changes in approach, progress, and difficulties? Several examples of these trends are given. In some countries they are only just emerging, while in others they have assumed considerable strength. In Mexico, Colombia, and Brazil, employment skills have been widely and specifically introduced in the upper ASE, through various mechanisms. In some cases, the mechanisms used are also innovative. These include the creation of apprenticeships in different environments and not solely in business, or as a coordinated concept of ‘work culture’ to include guidance.

Efforts have been made to provide the institutional mechanisms and conditions required to support these approaches. These include: general education or secondary education laws to incorporate these approaches; specific laws that aim to organize and safeguard the pedagogical objectives of some of the methods used to get closer to the world of employment, such as apprenticeships or teacher training; specific finance programmes; guidance to help schools develop the programmes. However, to date, no information is available to account for the institutional and curricular integration of these initiatives.

Undoubtedly, there is a risk that attempts to overcome the divide between the general and the specific, diversification and options, the inclusion of employment skills remain an ‘external’ to the programme, without forming part of daily life in the classrooms. As indicated in another paper (Jacinto and
Recent trends in technical education in Latin America

Terigi, 2007), given a structure and organization that is not easily changed, attempts to change the institutional and pedagogical structure proposed by policies were often forced to take ‘short-cuts. How far can these strategies for change go on the basis of short-cuts? At the moment, they are based on the recognition that the results of attempts to introduce more global educational transformations in the 1990s were far from those anticipated. Nevertheless, it is essential that strategies are developed as part of projects linked to teaching in a more comprehensive manner, coordinating a series of relevant actions so that students are able to learn better.

Another common risk is the scarcity or non-existence of assessments of this type of initiative. In particular, the introduction of employment skills requires management and assessment strategies, including the monitoring of young people and dialogue with those actors involved outside the school. It is also important to build up institutional, pedagogical, and teaching knowledge based on the best formats and meet the challenges for developing these approaches and mechanisms.

Lastly, we ask to what extent these strategies are coordinated with the idea of lifelong learning. As proposed by the Delors Report (1996), are the strategies moving towards a more flexible system that permits the diversity of studies and creates links between the different areas of teaching, or between a job and the return to training? At this time, it was hoped that such a system would “also help to reduce school failure rates and the squandering of resources”. As can be seen above, although progress has been made in this respect, it is only just a beginning.

What should be expected of these new trends? To what extent do these measures test responses to the new complex challenges faced by Latin American youth in their search for employment? Do they operate as a strategy to motivate and keep young people at school? Are they able to narrow the gap between theory and practice?

The questions are complex and the answers premature. In the meantime, international experience has shown that proposals that combine vocational
training with an adequate amount of academic content of a preparatory nature are useful provided they are well taught and the schools are well equipped. They even encourage young people to continue their studies (Lauglo, 2006; Ryan, 2003). So, as always, one question is the proposal and its possibilities. Another very different question is what essential conditions are required to implement the proposal with quality to obtain the desired results.

Secondary education is expanding in Latin America while qualifications are losing value and appear to be essential but not enough to provide occupational and civic training. Schools face inequalities both from the start (poor family conditions) and at the end (difficulties in academic, social, and job placement) (Tedesco, 2004). In addition, there are cultural variations. These include youth cultures and changes in the position of work in the structure of social identities, violence, poverty, and so on.

If the initiatives discussed here are introduced with sufficient quality, will they contribute to improving job placement among young people? Like secondary school, they appear to be necessary but are not sufficient.
4. APPROACHES AND STRATEGIES FOR THE VOCATIONAL TRAINING OF UNEMPLOYED YOUTH IN LATIN AMERICA: HAS ANYTHING CHANGED IN RECENT YEARS?

Claudia Jacinto

4.1 Introduction

In addition to a long tradition of institutionalized vocational training, for more than a decade *ad hoc* job training programmes have been developed in Latin America as a part of employment policies and/or the struggle against poverty. These are particularly focused on providing initial vocational qualifications and links to employment for unemployed youth, especially those on low socio-economic levels and with low levels of education. These measures have only reached a small portion of the potential population. The fragmented nature and limited scope of the programmes is often questioned. They are criticized as being one-off training programmes with few links to regular vocational training, formal education, development policies, or social integration (Cinterfor, 1998; Gallart, 2000; Jacinto, 1999). As these *ad hoc* programmes offering short vocational training directed at jobs at an operational level are still in force, the question arises regarding the extent to which approaches have been changed to respond to the previous limitations and new challenges. This is the central theme of this chapter.

There is considerable debate regarding the direction taken by these programmes and their contribution to the social inclusion of young people. Would it be better to encourage reintegration into formal education to ensure that young people receive at least 12 years of schooling? Is occupational training enough to give young people an opportunity to obtain a decent job or to earn enough to rise out of poverty? Have initiatives served to link regular education and vocational training? Has the trend to design courses based on supply rather than considering true market requirements been overcome?
This chapter examines the ‘models’ and limitations of the occupational youth training programmes introduced in the 1990s, and the changes and persistence of certain approaches in the programmes of the 2000s. The extent to which the measures have shaped coordinated policies for the transition from education to employment is questioned, as are recent advances in this respect, together with the gaps that can be detected.

First we look at the principal approaches of these programmes from the 1990s, analysing their achievements and weaknesses. Second, examples are given of some of the more recent intervention models that try to provide a response to the problem of job placement for young people from poor homes. The chapter considers the training models and their links to the labour market (particularly their relevance to formal employment or to the informal sector, including the generation of micro-enterprise); their relationship, usually limited, to formal education; the relations between the public and private institutions involved; the profiles of the target population; and the results, where this information is available.

4.2 The complex link to education and employment

A heterogeneous labour market: the difficult transition from education to employment for young people

The differences in educational and occupational opportunities and the unequal distribution of income are structural phenomena in the region. Globalization and the processes of economic liberalization and structural adjustment adopted in the 1990s have combined with this backdrop of exclusions to reinforce production heterogeneity. Although recent decades have seen certain technological and organizational modernization in the most advanced sectors,
smaller and micro companies have remained the same, and artisanal methods of production prevail.

As already mentioned in Chapter 1, between 1990 and 2004 economic growth was considered inadequate and erratic, and was at the base of the increase in unemployment, the expansion of low-quality employment, and emigration (CEPAL, 2005a). The proportion of the informal sector in urban employment rose from 42.8% in 1990 to 46.7% in 2003. At the same time, the gap between the average incomes from employment in the formal sector and the informal sector increased from 59% to 72% (CEPAL, 2005a). While salaried employment varied according to the annual levels of economic growth, a certain duality is clearly visible in self-employment. One section corresponds to activities aimed at survival in precarious conditions at low incomes, while the other, smaller section reflects formal production units, in many cases small businesses resulting from the outsourcing of certain processes by larger businesses.

However, the period between 2003 and 2007 experienced the greatest growth in GDP per capita since the 1960s. Thus, poverty levels and unemployment rates have been reduced, and income distribution has improved in some countries. However, there is still a high level of social and economic inequality, and migration persists as a result of unequal levels of development in towns, regions, and countries. Urban segregation is a reflection of these inequalities and generates blockages in access to education and employment (CEPAL; 2007).

The deterioration in employment markets and the increase in segmentation processes did not affect all sectors at the same rate. Young people were undoubtedly among the worst affected. Both demographic trends and the expansion of education almost universal at primary level and with high rates at secondary level, although with substantial differences between countries, has led to predictions that the relative position of young people in the employment market would improve in the 1990s. However, a number of factors have contributed to preventing this.
The majority of first-time job seekers tend to be young, and there is also a higher rate of turnover among young people. Unemployment rates for young people are at least double those for the whole of the economically active population. For example, towards the end of the 1990s, while the general urban unemployment rate was 10.2%, the unemployment rate for young people aged between 15 and 24 reached an average of 19.5% (Weller, 2003). This is in addition to the poor contracts and low salaries received by young people.

While the position of young people as a whole is complex that of young people from poverty sectors or with low levels of education is even worse. Unemployment rates increase significantly among those people who are on the poverty line and, as levels of education fall, the situation is aggravated. In economic recessions, young people from the lowest socio-economic strata are the most severely affected as they are forced to find employment if their parents are made redundant. In addition, employers from the formal sector are increasingly demanding minimum levels of secondary education as a guarantee of a certain level of behaviour and discipline rather than as a certificate of academic achievement40 (Scholnik, 2005). The most severe employment problems concern females, particularly those with a low level of formal education. In fact, from among the groups with low levels of education, the unemployment rates for young women exceed those of their male peers by more than half, while in the best-educated group (aged 13 and over) this gap is “only” 20% (Weller, 2006a).

Educational expansion with limits and poor structuring of the transition

With this employment market, the region has experienced limited expansion of secondary education. Vocational training systems were of significance only in some countries, and there were few training alternatives for those who did not complete secondary education.

40 In addition, contracts in the formal sector in Latin America are more rigid than in other countries and part-time work is less common.
Although recent decades have seen a huge growth in secondary education, this expansion has not been without limits. High repetition and drop-out rates remain a critical problem, together with poor-quality educational programmes.

The majority of young people in the region do not finish secondary education. Only in Argentina and Chile have the majority of young people today completed their secondary education. However, in Brazil, Paraguay, and El Salvador more than 60% of young people did not finish their secondary education, and this figure rises to more than 75% in Costa Rica and Honduras. There is broad inter-regional diversity in all countries, and young urban people living in a large metropolis are the most likely to finish secondary education (SITEAL, 2005c).

The expansion is inadequate and takes place at different rates. Schooling rates reveal how opportunities for inclusion vary among the higher and lower levels of income of society, with differences of around 20%, and in some cases of more than 30%. In some countries, educational differences increased in the 1990s. These include Ecuador, Argentina, the Dominican Republic, and Uruguay (CEPAL, 2005a).

Even in some countries with relatively high schooling rates, completion levels rarely exceed 50%. Moreover, figures show that the probability of completing secondary education is markedly lower in rural areas. For example, in Chile the proportion of young people in urban areas who successfully complete more than 10 years of school is 1.6 times greater than in rural areas, while in Guatemala it is almost 9 times higher (OREALC, 2003).

Thus, the group of students dropping-out from secondary education is made up of poorer youth and those living in rural areas. The reasons are multiple. A study based on household surveys indicates (CEPAL, 2003): (a) economic reasons, including the lack of resources in the household to...
meet the costs of attending school, and dropping out to work or to look for employment; (b) problems relating to the supply or lack of schools; (c) family problems, the need to do household chores, pregnancy, and maternity; (d) a lack of interest on the part of both parents and young people; (e) problems of performance at school: low performance, problems of behaviour, and age-related problems.

How much is the secondary-level qualification ‘worth’ in the labour market?

While many young people are obliged to enter the labour market without completing secondary education, the basic educational requirement for obtaining a good job has risen to the successful completion of secondary education. At the same time, secondary-level qualifications in the region are losing their value. Thus, in some countries, secondary education is becoming a necessary but not a sufficient requirement to obtaining a good job (Filmus, 2001).

Moreover, even for those who complete secondary education, this is no longer the passport to rising social mobility, as it is significantly affected by the dynamics of the employment market and by the growth in unemployment, informalization, instability and polarization of employment in the region. In effect, given an economic model with unequal consequences, the employment market has become segmented and polarized as secondary education has expanded. In the last decade, unemployment rates also rose among those who only completed secondary education, although not to the same extent as among those who did not finish primary education. (The least affected by the restrictions of the employment market were those who had completed post-secondary education.) There are significant variations between countries (Chapter 1).

Moreover, a secondary-level qualification is associated with better quality and more stable jobs. Broadly speaking, informality decreases as the level of education and the educational disparities between employees in the formal sector increase. Opportunities for entering most production sectors of the economy are more and more frequently reserved for those people.
with the highest levels of education. This trend varies according to country (SITEAL, 2006).

What can be expected from programmes designed to provide specific vocational training aimed at immediate employability in the employment market, given an environment where a secondary-level qualification is a necessary but not a sufficient requirement for obtaining a job? This approach has been questioned. Some countries in the region have experienced ideological changes in their governments in recent years. Some initiatives regarding specific youth training and employment programmes developed in the 1990s have been closely assessed. Nevertheless, short occupational training has been and continues to be the path followed by many programmes. Thus, we wonder whether there have been any substantial changes to the approaches to adapt them to new contexts and ways of interpreting the problems.

4.3 The 1990s: co-existence of traditional approaches with new training models

In the 1990s, as part of the structural transformations discussed above and with financing from multilateral organizations, social expenditure tended to be directed towards compensatory measures, employment programmes, and vocational training (this section is followed up in Jacinto, 2006b). Many of these programmes were aimed at young secondary or even primary school leavers. Generally, this included the introduction of two types of ad hoc youth employment training programmes in parallel with the regular vocational training. Thus different management methods governed the measures aimed at providing training for disadvantaged youth:

- The vocational training programmes in charge of public centres, dependent on tripartite vocational training institutions or ministries of education.
- Many new ad hoc programmes, however, fell within one of two types of initiative: programmes linked to active employment policies, particularly focused on training and also on the generation of self-employment;
and social programmes, linked not to employment policies but to programmes designed to struggle against poverty and/or aimed at marginalized populations. Management methods used in the ad hoc programmes include:

- programmes adopting competitive ‘market’ models for the selection of training bodies and courses through tender;
- programmes awarding subsidies to organizations working with disadvantaged sectors.

The regular vocational training programme and the new models have trends in common, including the establishment of public-private ‘alliances’ and greater decentralization towards regional organisms and local governments. The different types of occupational training directed at unemployed youth, particularly those from poverty sectors or with low levels of education, are discussed below.

**The traditional programme of vocational training and measures for poor sectors**

Since the 1950s, vocational training programmes in the region for young people who had not completed secondary-level education have been given in tripartite vocational training colleges (PT) or VTcentres dependent on the ministries of education. The vocational training college was usually financed through parafiscal contributions. ‘Learning’ programmes became part of the first public policy for training and employment specifically directed at young people (Casanova, 2004), the training, usually lasting two years, being aimed at preparing qualified workers with practical training in enterprise. However, the social sectors with access to many of these conventional centres were not usually the most disadvantaged sectors, but, rather, those who could at least potentially join the formal sectors of the economy, as mentioned above. Training programmes through training centres turned towards the informal sector in the 1970s. Valuable experiences were introduced, aimed at the informal sector, providing vocational training and guidance to populations with low resource levels. These were sometimes associated with credit
programmes for the establishment of micro-companies (Gallart, 2004). Some institutions set up workshops and machinery in local communities for use by self-employed workers. Hours tended to be flexible, and training suited to requirements. The training centres were often closely linked to community associations and different types of local CSOs, which offered complementary services. Young people from the target population receive training to enable them to set up in a trade (usually traditional occupations), either self-employed or in a micro-enterprise. As discussed below, the low levels of work experience of young people often weakened the potential for the development of such micro-enterprises. In addition to these valuable experiences, which focus on urban and rural poor sectors, some VT centres offered a programme that differentiated between high-quality circuits and requirements (requiring complete secondary education to access courses) and other lower quality circuits and resources in local communities, aimed at informal low productivity occupations.

Ad hoc training programmes for employment

As mentioned above, beyond the traditional programme, the 1990s saw the introduction of social programmes to fight against poverty ad hoc. These programmes were directed at providing vocational training to disadvantaged young people who normally did not have access to conventional vocational training institutions. Many of these programmes were heavily financed by cooperation agencies and multilateral banks, coordinated by central government, and introduced by a wide variety of institutions and organizations. In general, these programmes formed part of the non-formal education system (Govinda, 2008; Hoppers, 2006) as the courses were offered in parallel with regular vocational training programmes and did not usually lead to a

---

42. In addition, programmes directed at micro-enterprise did not usually recognize their internal heterogeneity: from subsidized micro-enterprise with little viability in the market, via self-employment liable to expansion, to competitive micro-enterprise holding certain market niches. Gallart (2004) states that the programmes aimed at poor populations try to move the weakest micro-enterprises towards a more competitive situation, although this is rarely feasible.
recognized qualification. However, in some cases, the training institutions were conventional VT centres.

The two dominant models of the ad hoc programmes are examined below.

**Training in employment policies for unemployed youth**

The model of programme with the greatest relative weight was mainly designed by the Ministries of Work and/or Employment and financed by the Inter-American Development Bank and, in some cases, the World Bank. The ‘market’ model was characterized by the sub-contracting of courses to mainly private centres by means of tenders. They offered flexible occupational training directed towards the formal labour market, and included internships with companies. The training bodies were responsible for the design of the courses and for finding internships for young people.

In this training model, courses offering training in trades were subcontracted to a variety of public and private institutions and organizations. These included trade unions, CSOs (some with long experience in this field, and others that had been created more recently), and private training bodies. Examples of the market model include the national training programmes for disadvantaged young people introduced in a number of countries in Latin America (Argentina, Chile, Uruguay, Peru, Panama, Colombia) and known as the ‘Chile Joven’ model. Some traditional VT centres also took part in the public tenders for training courses of this nature – for example, SENAI, SENAC, and SENAR in Brazil under the PLANFOR (Leite, 2004).

These programmes were examples of short, inexpensive training combined with on-the-job learning through internships. In some cases, employability rates were higher than for other programmes, as they encouraged the creation of courses more directed towards specific job placement opportunities. However, the impact on employability was closely

---

43. The 'voucher' system was another method adopted by the market model. This consisted of giving workers vouchers so that they could select the training course most suited to their needs.
linked to the overall behaviour of the labour market, and to the scope and design of the programme. For example, in Argentina, where the numbers involved were high (the goal was to train 200,000 young people up to 30 years of age), the programme was developed during a period of huge unemployment. Therefore the impact on youth job placement rates was negligible (Devia, 2003). However, in Uruguay, where the programme was very much more limited and used a number of designs adapted to the different sub-groups of young people, job placement rates were satisfactory (Lasida, 2004). The impact on income was positive in the majority of cases. According to figures from four countries (Argentina, Chile, Peru, and Uruguay), this was greater than in a control group (Ibarran and Rosas, 2006).

One weakness of these types of programmes was their ad hoc nature and limited institutional character. Many of the training bodies involved in these programmes were more flexible than the traditional programmes, although short-lived – many were created solely to take part in these programmes (Jacinto, 1997) – and barely sustainable. Thus, attempts to develop an alternative model to traditional institutions, aiming to overcome bureaucracy and the tendency to repeat training courses of little relevance to labour market requirements, affected sustainability and the promotion of institutional learning. One of the problems faced by occupational training programmes continues to be how to generate contract conditions that encourage experimentation, the formation of stable technical teams, and institutional sustainability. At they same time, they should establish links to the labour market and produce acceptable post-training job placement results (Jacinto and Bessega, 2001); Lasida and Berruti, 2002). The system used to tender for courses specifically designed for unemployed youth continued to be used in during the decade in some countries, including Uruguay, Peru, and Colombia, where the participation of SENA as the national training body is relevant. At present, different models of an institutional nature are at play. Solid permanent institutions exist together and even the most dubious adapt to offer improved quality.
Recent trends in technical education in Latin America

Subsidies for organizations with young people from poverty sectors

Another type of *ad hoc* programme was also developed through the Ministries of Social Development and/or Youth Institutes and often financed by multilateral agencies. In these cases, CSOs, foundations, churches (especially the Catholic church), national training centres, local governments, and similar bodies received subsidies from the government to develop the programmes as part of the non-formal education programme. Training in these cases was directed towards the informal sector, self-employment, and/or the organization of micro-enterprises.44

For the social programmes, alliances were often forged with different public entities, including health services, education, training, and private social bodies such as microcredit development banks and youth centres. They were noted for the adoption of longer term flexible intervention strategies, suited to the nature and expectations of young people. In many cases, this type of programme tended to develop a more integral approach to training, combining the teaching of technical skills with social abilities (even in the broadest sense – for example, including training in civic competencies), job searching, and careers guidance. The positive effect on self-esteem and the value that young people placed on this opportunity for participation has frequently been reported (Jacinto, 1999; Pieck, 2001, 2004). The impact of non-formal education programmes for improving the living conditions of poorer women is of particular note, providing them with social networks, emotional support, material aid, and so forth. This led to comments on the potential of the programme to help women beyond the purely economic aspects.

Nevertheless, there tended to be little concern about the technical quality of the courses in programmes of this nature in either the marginalized urban

44 The difference between employment programmes directed towards the formal market and social programmes aimed at the informal sector is not as clear. Many programmes (approximately one third of the relevant programmes) contained both components.
populations (Gallart, 2000; Jacinto, 2002b) or among rural populations (Pieck 2001b, 2004), and there has been little clarification of the expected results of specific job placements. In some cases, the courses were aimed at providing training in general entrepreneurial skills, without providing training in technical skills, or specific training for a particular business. Nor did the programmes consider whether the young people selected for the courses had any previous experience or whether they possessed the personal traits required to manage their own business (Jacinto, 2002b).

However, another relatively significant portion of the social programmes directed at young people promoted the generation of micro-enterprises based on a more specific and complex intervention model. These included selection mechanisms, training, access to credit, and post-training guidance. As has been seen in other contexts (Govinda, 2008), this type of intervention model is more likely to be successful. But these more demanding programmes (which sometimes involved micro-credits) often excluded the poorest sector, as entrance requirements included the possession of a business and/or secondary-level qualification (Jaramillo, 2004). Entrance requirements to this type of programme were based on certain evidence that a particular type of young person was required for business initiatives to be successful. This included experience in the work in question, personal qualities relating to the profile of ‘entrepreneur’, and a business ‘idea or project’ (Lasida, 2004).

The scope and limit of strategies started in the 1990s

In general, the interventions represented attempts to give young people more opportunities in increasingly excluding social contexts and difficult labour markets. The most relevant aspect was the recognition of the need for urgency in solving the problem, and the need to approach specific occupational opportunities was increasingly stressed. One sign of this was the inclusion of internships or training periods in the companies in the so-called ‘market’ programmes. However, many weaknesses were revealed:

Although there was some agreement on the need for the government to modify the organization of training policies according to ‘supply’ (depending
on institutional and human resource availability), the ‘market’ mechanisms and subsidies used did not lead to the creation of a quality vocational training system, linked and adapted to the needs of young people, labour market requirements, and the requirements of social-economic development. In fact, many of the programmes based on tenders for courses individually designed by the suppliers resulted in fragmented and unsustainable programmes. These initiatives did not always have the hoped-for effect on the relevance and quality of the training system. They failed to consider the strength (institutional, political, and sometimes technical) of regular vocational training institutions in each country. In addition, they hampered investment in good didactic materials and the progressive improvement of training strategies at the centres.

Hardly any of the measures taken encouraged links with formal education. Most of the qualifications provided were not recognized in formal education or in regular vocational training, even though the majority of young people involved did not have a secondary-level qualification. One of the impacts of the programme was that almost 30% of the young people re-enrolled in formal education (Jacinto, 2004a).

The impact of the programmes with respect to access to formal employment varied between countries, but on the whole it was limited, with slight improvements in some sub-groups (Jacinto, 2004a). The impact on micro-enterprise and self-employment was also low, given the small number of companies that managed to survive beyond the first year. In addition, the more integral programmes (which included training, support, and credit) tended to exclude the more disadvantaged youth (Jaramillo, 2004a).

Although training was sometimes linked to other training or cultural measures, this criterion was rarely considered by the programme’s central

45. In effect, the evidence shows that the initial results of programmes to encourage self-employment and microenterprise among young people with low social and education levels required greater follow-up support, in the form of: help with the selection of viable production or service niches, management and marketing training and training in business competencies, access to credit, and technical aid, including social and psychological support (Ruetalo, Lasida, and Berutti, 1998).
management in either the selection or the evaluation of the courses. The broader approaches that recommended coordination with local and/or sectoral development projects and the social inclusion of young people were generally restricted to limited experiences with little coverage (Jacinto, 1999).

Most of the initiatives merely simplified the problem of youth job placement, particularly of poorer youth. The measures highlighted the low training levels, with little consideration for the importance of formal qualifications in job placement and the exclusive nature of the labour market. These measures were based on the idea that low youth employability was due to inadequate qualifications. Although this was one of the reasons for huge unemployment among young people with low levels of education, it is not the only reason. With a general decline in the availability of jobs, better-educated young people tended to displace the less-educated, even in jobs that did not require high technical qualifications.

There was also a weak overall vision of young people that failed to take into consideration social and cultural issues of importance to adolescents and young people. Nor did it consider the range of social and educational situations that define the poorer youth in terms of geographical, local, and family contexts. The situations of the target youth population varied enormously: from highly marginalized and isolated groups (such as indigenous populations, ‘street children’) to poor urban sectors or rural youth.

Lastly, in spite of the diversity of the initiatives, they only covered a small part of the potential population when all young school leavers without qualifications are considered.

4.4 Permanence, persistence, novelty in existing approaches

With a complicated social and labour environment, and inequalities that persisted while formal schooling expanded and huge technological innovations took place, the limits of a strategy mainly based on vocational training with weak institutional support and limited approaches were clear.
More recently, changes have been observed in the approaches. These are partly linked to the limitations observed, partly to changes in the political and ideological views of the different governments in the region, and partly to adaptation to new contexts. Although the programmes of the 1990s were both criticized and defended, many continue in place with adaptations while others include new strategies from earlier programmes.

In order to discuss the similarities and differences in the approaches and strategies, we have selected 52 programmes that started and/or were reformulated at the start of this century in different countries. We examine below the institutional actors involved, the target youth populations, the training components and the strategies for post-training employability.

**Permanence and change in the institutional actors**

The programmes, introduced since 2000, continue to be significant in the design and financing of national governments. The involvement of multilateral or bilateral cooperation agencies (with credit or subsidies) remains evident, in programmes with broader scope and in other programmes with lower, regional coverage. These include Entra 21, co-financed by the MIF and private companies and coordinated by the International Youth Foundation. Thus, external funding continues to influence the design and type of programmes, but to a varying extent.

Courses are still put out to tender in several countries, including Chile, El Salvador, Colombia, and Uruguay. In some countries with traditional and solid vocational training programmes, these systems were already assuming a central role in the development of the programmes, as in the case of SENA in Colombia with the ‘Youth in Action’ programme.

Other countries, which in the 1990s opted to sub-contract to private training centres, now enjoy the strength of the institutional nature of vocational training. This is true in Argentina, where a national minimum income programme is linked to technical schools and vocational training services dependent on the provinces.
For programmes of a more social nature, the different CSOs continue to have a strong presence. Some of these reach the so-called ‘second floor’ level, delegating the management to other, smaller NGOs, designing and coordinating the general programme. One example of this is the SES Foundation, which runs a youth training programme in 15 villages in Argentina. An increase was observed in the participation of business-based CSOs in some countries, linked to the approach referred to as ‘corporate social responsibility’. One example of this is the programme developed in Brazil by the Instituto Hospitalidade. This non-profit-making organization gathers together 200 businesses linked to the tourist and trade sectors and the CSO, aimed at promoting corporate social responsibility. Training has been provided to more than 9,000 people since the start of 1998. The project links education, the labour market, culture, protection of the environment, and tourism. It received the support of the Brazilian Government, international organizations, local government, and business. It was recognized by the Ministry of Tourism as the principal organization for training human resources for the tourist industry using methodology and tools especially designed for the sector and for the trainers. It currently extends a training programme for unemployed youth to 12 states, with a budget of US$5,427,438.

The businesses also offer locations for internships, sometimes arising from incentives for participation involving tax rebates. This is the case in Chile, Colombia, Brazil, and, to a lesser extent, in Argentina. Nevertheless, the limited use made of these tools by business has been observed. Businesses tend to prefer to pay fines for not using the benefits rather than take on apprentices (Finnegan, 2006a). The construction of a ‘culture that links business and training centres’ favouring the institutionalization of these links is a lengthy process requiring incentives for all. In addition, the companies sometimes require social and educational profiles that do not match those of the youth targeted for the programmes.

The existing programmes emphasize the need to form part of public policies, eliminating their ad hoc nature, and coordinating with regular training institutions. Thus, there are visible links with regular vocational
Recent trends in technical education in Latin America

training centres, with youth and adult education centres, and with employment services. However, it should be noted that not all ad hoc programmes from the last decade disappeared without contributing to sustained policies. Some successful projects set up with international financing have managed to get over the installation stage with cooperative support, to form part of government policies with national financing. One such programme is the Projoven programme in Uruguay, which has received funding from the National Employment Fund for more than 11 years. More recently, the Youth in Action programme in Colombia has followed along the same lines. Other projects started in the 1990s – for example, CAPLAB in Peru, which has managed to strengthen public occupational education centres – aimed to have an impact on public policies right from the start.

Following a trend that started in the 1990s, the majority of national programmes are under a decentralized management. Thus provinces or states, and particularly boroughs, have assumed an increasingly more significant role as actors in the programmes, although the scope and modes vary according to the country. Some boroughs with resources develop their own policies in this respect. Some of these initiatives encourage the establishment of local inter-institutional networks for training and employment. Others have established interesting links between local government, training institutions, and employees in favour of the development of programmes for unemployed youth. Some studies reveal efforts to establish links at local level that combine resources and services and promote links between general education and vocational training, and true job niches. These experiences reveal interesting links between public resources, employers, and educational establishments and/or training centres. Examples include the cases in Medellín in Colombia, Rosario in Argentina, and Montevideo in Uruguay.

An interesting example is the network of centres set up by the Corporación Paisajoven project, a combination of the Presidential Council for Medellín, the Metropolitan Area, and GTZ (German Agency for Technical Development). The network focused on youth and aimed to strengthen inter-institutional support, management capacity, and the mobilization of
resources. The lines of action introduced included: (a) youth organization, in order to strengthen coexistence and civic participation, (b) education that included the design of pedagogical models, and (c) training and development for employment aimed at improving training and development programmes for youth employment. When the backing provided by Paisajoven came to an end, the network continued to take part in courses from the Colombia Joven Programme. Between 2002 and 2005, the Entra 21 project was developed, providing training and job placement for young people. Since 2005, following the development of a consolidated intervention model, the network has collaborated in the design of the ‘Jóvenes con Futuro’ programme developed by Medellín Town Council.

However, in the majority of cases, efforts to establish local links between training institutions and the workplace did not lead to the formation of broad networks supporting a strategic vision of local development, but were one-off experiences. Referring to the introduction of coordinated policies between the CSO and the government, Jaime Ramírez Guerrero (2001) indicates that there are major differences in the strategies, methodologies, and tools used to tackle youth unemployment. These differences are evident in programmes with opposing approaches. These range from programmes aiming to combine immediate direct action with institutional construction to those that fail to consider this aspect and are limited to providing a circumstantial response.

In short, few ‘networks’ are established on the basis of an economic and social vision of development, with the intervention of the government and other local actors, based on the endogenous possibilities of the economic sector, social and institutional actors, and resources at territorial level (Tapia, 2005) (Table 4.1).
Table 4.1  Types of institutions participating in programmes

<table>
<thead>
<tr>
<th>Type of participating institution</th>
<th>No. of programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGO</td>
<td>52</td>
</tr>
<tr>
<td>Coordination/link with regular vocational training services</td>
<td>28</td>
</tr>
<tr>
<td>National government</td>
<td>28</td>
</tr>
<tr>
<td>Multinational/international cooperation organizations</td>
<td>26</td>
</tr>
<tr>
<td>Businesses</td>
<td>23</td>
</tr>
<tr>
<td>Town councils</td>
<td>22</td>
</tr>
<tr>
<td>Regional/state government</td>
<td>13</td>
</tr>
<tr>
<td>Trades unions</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: Total number of programmes analysed: 52.

The components of training: consolidated approaches and some debates

Differences in the direction of the courses continue to be evident between: (a) those most related to specific opportunities in the job market, particularly those that include internships and/or links to business sectors and/or trades unions and lead to paid employment, and (b) those more linked to social programmes or forming part of so-called ‘youth policies’ more directed towards self-employment or micro-enterprise, often in cultural industries. Nevertheless, some programmes lead to paid employment or self-employment depending upon the available job placement options. Significant numbers of ad hoc programmes continue to exist, together with the offer of short one-off courses, but, as mentioned above, there are initiatives to back a more institutional structure.

Two features of the earlier programmes persist and have become established. There is some agreement that ‘training alone is not enough’ and that there is a need for wider styles of intervention.

First, internships at the workplace have become a widely used (although not generalized) tool on courses directed at training for the formal market. Second, courses aimed at disadvantaged youth tend to include technical
training (theoretical and practical), including social and work competencies and careers advice. Although there is broad agreement on the importance of this stage of training at work, the design and implementation of practical work sessions is by no means free of problems. However, the huge potential of internships is not questioned. These tend to motivate young people and are sources of learning, which often lead to later employment, as a percentage of apprentices stay on after completing the internship (Lasida and Rodríguez, 2006). Materials to provide guidance within inter-governmental organizations have also been developed (Cinterfor, n.d.).

Course modules on “social and work competencies or skills for life and work” take up between 40 and 200 hours of the training programmes and are directed towards the development of interactive competencies and conduct linked to the workplace. Manuals to this effect have even been widely distributed in the region (Cinterfor, 1998; Kaplán, 1997). Using workshop-style courses, some programmes focus on operational skills such as how to cope in a job interview, while others assume more complex formats working with the so-called ‘occupational project’ methodology (Silveira, 2005). Monitoring of graduates has shown that young people value what they learn in these modules (Lasida and Rodríguez, 2006; Scarincio, 2001; Silveira, 2005). Some programmes, recognizing the importance of basic mathematics and language competencies, also include a module to strengthen these skills. A number of innovative experiences have been observed in this area linking training to basic and technical competencies (Jacinto, 2001a).

Competency-based curricula have gradually taken its place in curriculum design, and in some countries – that is, in Chile and Colombia – it has been incorporated into national policies. Attempts to develop competency validation and certification systems have also progressed. In Chile, the Chilcalifica Programme has drawn up and validated a set of labour competency standards. These are used to assess and certify an individual’s competencies in performing a particular production task. Both countries have moved forward in the identification and standardization of employment competencies, subsequently classifying them in an occupational profile, particularly in some sectors.
This involves the direct participation and collaboration of the actors in each production sector, particularly companies, workers, and trades unions. It also includes evaluation, based on specific criteria defined as ‘labour competency standards’. However, these approaches have not been adopted in all countries and programmes, particularly those of a social nature, and continue to be a subject of debate (Vargas, 2004).

More and more frequently, it is recognized that training alone is not enough for the organization of youth ventures. Although training offers teaching in the skills required to set up an enterprise, whether through basic training that covers the gaps in elementary education or through specific training that provides skills in trades leading to the development of a specific enterprise, technical aid (assessment of business plan and support in project development or implementation) and economic or financial support (micro-credits as young people with limited resources are not easily able to obtain bank loans) are increasingly seen as essential components of the programmes. These conclusions are in line with those reached in other areas of the world (Govinda, 2008; Hoppers, 2006). Moreover, the most comprehensive approaches take into consideration the need to act on legislation and links to development programmes to take the ventures closer to the formal market (Tokman, 2002; Wallenborn, 2001).

Opinions differ regarding whether young people should be encouraged towards self-employment or setting up in business. While it is clear that there is no universal and magical solution for youth unemployment, some believe that limited programmes offering support, training, and economic aid are the solution. Others are of the opinion that young people’s attitude to employment is changing. There is a strong inclination towards the creation of their own jobs, thus combining youth creativity and independence. The opportunities for deploying these characteristics will depend upon the resources and social and cultural capital of households. In effect, the number of young people in independent jobs in the region only comes to 14% (compared to 32% among adults), and only one in ten workers who work for themselves (self-employed or employer) are aged between 15 and 24. On the whole, poorer youth are
entrepreneurs through necessity. However, opportunist entrepreneurs tend to come from higher levels of income and education. Unlike in Asia, most young Latin American entrepreneurs are from the middle and upper sectors, and data are only available for successful ventures at this level (Kantis, 2005).

This brief look at the training models used in the programmes has revealed the existence of more comprehensive strategies that go beyond simple one-off training. Some components, such as the introduction of social and vocational training models above and beyond the technical content, internships, careers advice, and help in the establishment of micro-enterprise continue to be lines adopted as in the programmes of the 1990s. The competency-based approach is adopted more and more frequently, especially for more widespread projects linked to general vocational training policies (Table 4.2).

### Table 4.2 Components of training

<table>
<thead>
<tr>
<th>Components of training</th>
<th>No. of programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific technical training</td>
<td>48</td>
</tr>
<tr>
<td>Training in social and personal skills</td>
<td>29</td>
</tr>
<tr>
<td>Training in business management</td>
<td>23</td>
</tr>
<tr>
<td>Internships</td>
<td>19</td>
</tr>
<tr>
<td>Basic competencies in language and mathematics</td>
<td>11</td>
</tr>
<tr>
<td>Monetary support/grants/subsidies</td>
<td>8</td>
</tr>
<tr>
<td>Cultural activities</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total number of programmes analysed:</strong> 52</td>
<td></td>
</tr>
</tbody>
</table>

Note: Total number of programmes analysed: 52.

**Improved links to primary and secondary education**

What is relatively new or expanding in this field? More and more programmes propose links to regular formal education. There is also more emphasis on the importance of including support and advice for young people at the job placement stage. In addition, more programmes, especially those linked to Youth Institutes, recommend cultural training, with more opportunities for young people themselves to take leading roles.
Some programmes today recommend links to primary or secondary education services, generally through mixed or alternative learning. This is the case in Argentina, Chile, Brazil, Nicaragua, and Mexico. These links aim to encourage young people (and adults) to complete the primary and/or secondary level or baccalaureate using strategies that try to offer a response to their needs and interests that are of more relevance than the traditional services.

The programme in Chile is probably the most systematized and evaluated experience of this type. Flexible study levels are part of the ‘Chilecalifica’ programme, in which the Ministries of Education, Work, and Economy take part. The programme receives 50% of the financing from the World Bank in the form of credits and 50% from state contributions. Between 2002 and 2004, 42,000 people certified their primary education studies and 74,000 their secondary education studies under this programme. One interesting aspect is that the programme has higher pass rates than traditional adult education programmes (Letelier, 2005) (Box 4).

Another programme designed along the same lines was developed in Mexico. The programme ‘Cero Rezago Educativo is a set of strategies introduced in 2003, independent of the regular programmes of the National Adult Education Institute, directed at increasing the number of young people and adults who enrolled, remained, and graduated in the programme. These students, aged between 15 and 34, had completed primary education and/or had some degree of secondary education. Communities, organizations, and society as a whole were invited to take part rather than individual young people and adults. The purpose of this strategy was to generate a degree of commitment to encouraging individuals on the verge of falling behind in their education, using a network of transitory support (tutors).

Another similar programme in Argentina has a significant feature. It is one of the possible considerations in a broad social programme to subsidize the unemployed. In effect, the component of the ‘Más y Mejor Trabajo’ (More and Better Employment) Plan (referred to as the ‘completion of education’
Approaches and strategies for the vocational training of unemployed youth in Latin America: has anything changed in recent years?

Box 4. Levels of studies within the Chilecalifica Programme

The available data indicate that almost 75% of the students enrolled successfully complete their studies. The failure rate is approximately 15% and the drop-out rate 10%. The results are associated with the quality of the education received. People from a stable home who are employed, particularly those working for medium-sized or large businesses, are more likely to succeed (Letelier, 2005). What are the main characteristics of this alternative programme for completing studies aimed at young people and adults?

• It is decentralized, developed by specialized educational establishments, in schools or colleges, at the workplace, or in social and community halls participating through tenders.
• It is free and flexible, as it allows students to study at their own speed, according to their conditions and available time.
• It is structured in learning units (supported in the Adult Education Curriculum Reform of 2004) and combines classroom and self-directed learning activities.
• The supporting textbooks are free, provided by the Ministry of Education.
• The same Ministry is also responsible for evaluating learning and awarding qualifications.
• The educational centres are paid according to students’ results and not by attendance rates, as in the regular education system. Each establishment receives a 25% advance at the start of the process. When the educational process is completed, the balance is paid based on the number of students who successfully passed the corresponding school year.

The completion rates are satisfactory. One controversial aspect is the system of payment according to results. This may result in a selection process where more promising students are admitted and others are refused entry. It would be useful to establish the impact on institutional sustainability.

One impact study shows that the successful completion of secondary-level education has a positive effect on incomes. According to the figures, the percentage of variation in job incomes is 9.7%. This impact is mainly noted among females and the younger population. The effect is slightly negative among older males.

The impact on youth employment is positive (+5.6 in young people between 18 and 30 among those who successfully completed secondary education in the programme and the control group). Among adults, this impact is negative. In addition, follow-up surveys show a high level of satisfaction among the beneficiaries, at both primary and secondary level.

Source: Letelier, 2005.
plan) aims to allow unemployed workers and the beneficiaries of social programmes to certify their training using flexible mechanisms significantly directed towards the world of employment. The students’ and teachers’ textbooks are provided and financed by the programme. It is run through the Youth and Adult training centres, dependent on the Ministries of Education in the 24 provinces. It includes classroom activities (including tutorials) and self-directed learning. Up to 2005, there were 80,212 beneficiaries enrolled, of which 63% were completing their primary or secondary studies, and 42% were following vocational training courses. A total of 80% were women.

The recent emphasis accorded these programmes demonstrated the importance attached to obtaining a primary or secondary education qualification. The fact that the initiatives are free, promoted, and supported with materials and flexible services tailored to poor young people and adults with other responsibilities, demonstrates that formal education is considered a key factor in training for employment. Existing evaluations and evidence from other regions (Hoppers, 2006; Govinda, 2008), although limited, shows the combination between formal and non-formal education in training programmes (Table 4.3).

Table 4.3  Coordination between formal and alternative education

<table>
<thead>
<tr>
<th>Coordination between formal and alternative education</th>
<th>No. of programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary or secondary education of young people and adults</td>
<td>14</td>
</tr>
<tr>
<td>Common secondary level</td>
<td>2</td>
</tr>
<tr>
<td>Common primary level</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Total number of programmes analysed: 52.

Assistance in the job placement process

Apart from the preparation and technical skills acquired, many young people are unable to handle the codes, roles, and daily routines of the workplace. In many cases, this dissatisfaction or employer discontent is the reason behind job loss. Given the uncertainty of job markets, their varied nature, and unequal access to information, many young people require a kind of ‘bridge’
between school and work. In some of the programmes, this takes the form of guidance and intermediation on completion of the training courses. The need to include support in the job placement process is increasingly recognized as an essential component of the problem. This might include providing links to the companies and information on available jobs, guidance in selecting an appropriate career, advice on job search processes, and similar forms of assistance. Based on some of the Youth programmes of the 1990s, other recent programmes such as the Entra 21 have included this component as part of the training. Projects must respond to a clear demand from the labour market and teach the skills required to enable the trained young people to find and keep a job (Box 5, Table 4.4 and Box 6).

Box 5. ENTRA 21

ENTRA 21 was started in 2001 and the first stage concluded in 2006. It subsidized 35 projects with approximately US$375,000 each over 3 years, reaching more than 12,000 young people in 20 countries. The approach aims to:

- Go beyond training in traditional trades towards ICTs.
- Foster greater rapprochement with the private sector and with employers in general, in order to include job placement strategies when proposals are formulated.
- Encourage labour market analysis so that training programmes are relevant and lead to higher job placement rates.
- Provide quality training, guaranteeing the integration of technical training with personal and social skills.
- Guarantee young people access to job placement services, whether as employees or self-employed.
- Promote complementary services and coordination of work in alliances between non-profit making organizations, businesses and governments.

It is worth highlighting some interesting aspects of the design and implementation of this programme: the approach to occupations involving the use of new technologies and the comprehensive training approach, including training not only in technical skills but also in personal and social skills and offering an internship; the importance placed on alliances between the public and private sectors in the design and implementation to pool resources and facilitate subsequent job placement processes – a point that is of utmost relevance, offering
commitment to job placement from the design stage on. This is not just one more vocational training programme, but an integration programme that incorporates focused training. Some results of the programme include:

- Job placement rates between 68% and 40%.
- Average monthly salary equal to or greater than the minimum wage, irrespective of contract type.
- The service sector took on the most employees (100% in Panama, 52% in the Dominican Republic and in Brazil), followed by trade (42% in Brazil). The size of the employer companies varied from country to country.
- Young unemployed people who worked after graduation rated the course as extremely useful or quite useful.
- All the young people, irrespective of their job status, felt that their personal abilities had changed.

Source: Entra 21, www.iyfnet.org/

<table>
<thead>
<tr>
<th>Table 4.4  Type of support in placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of support in placement</td>
</tr>
<tr>
<td>Guidance</td>
</tr>
<tr>
<td>Intermediation, support</td>
</tr>
<tr>
<td>Micro-enterprise: technical assistance, microcredit, subsidies</td>
</tr>
</tbody>
</table>

Note: Total number of programmes analysed: 52.

Box 6.  ProJovem

ProJovem is a programme of education, occupational training, and community action that started in 2005 in Brazil. The responsible bodies are the General Secretariat of the Presidency, the Ministry of Education, the Ministry of Labour and Employment, and the Ministry of Development. The programme is directed at young people aged between 18 and 24 who have not been able to complete basic education (which includes primary and secondary education) and who do not have formal links to the job market. The participants are awarded a grant worth R$100.00 per month.
The finance and management of the programme is decentralized, operating in the boroughs of 27 Brazilian capitals and 34 cities of the metropolitan regions. ProJovem has a Managing Committee and a Technical Commission that come under the National Coordination of ProJovem.

From an interdisciplinary cooperation perspective, the programme offers training that is characterized by seeking the active participation of young people in the training process and by combining theoretical and practical training.

The courses are organized along three lines: elementary education, vocational qualification, and community action requiring 1,200 hours of attendance. This includes lessons in English and in computer skills. The course is arranged as 24 hours per week of classroom activities, guided visits to public institutions, and practical training. In addition, there are 400 hours of blended learning divided into four training units: ‘Youth and City’, ‘Youth and Work’, ‘Youth and Communication’, and ‘Youth and Civic Responsibility’. Certification of the successful completion of the course is through the Chamber of Primary Education and the National Council of Education.

The vocational training section is made up of 350 hours: 150 hours for initiation to the world of employment and general technical training, and 200 hours for specific training in a vocational area. The programme covers 23 vocational areas, each of which includes four occupations. These include administration, art and culture, construction, education, public management, tourism, fisheries, transport, and health. Following a social and economic analysis, the borough selects four vocational areas and the young person selects one, receiving training in the four jobs included in the area. In addition, the student develops a vocational guidance plan enabling him/her to make the best possible use of the technical and practical opportunities offered by in the course.

The Community Action line proposes that students collectively carry out a practical exercise in civic responsibility to gain knowledge of the social context in which they live and recognition of their rights. A Community Action Plan is prepared from an analysis of the principal problems of the community. This plan is implemented at a later stage.

In 2005, ProJovem accepted 200,000 young people in 27 capital cities, and in 2006, the programme was extended to cities in the metropolitan regions, amounting to 60,000 young people.

Source: www.redetis.iipe-ides.org.ar
As has already been shown above, these examples of job placement and work guidance, carry out a vital role in stimulating the process of information on work posts as well as helping in the identification of jobs available according to the profiles of the young. Nevertheless, the state of the art shows that, further to its intentions, in general terms there is little capacity to link actions, focal points and areas of interest with other actors or institutions working with the young (Duarte Quapper, 2005).

Vocational training with cultural training and social participation of the young

Within the framework of the blooming of the so-called ‘new youth culture’ and of the growing importance of the ‘voice of the young and their expectations’ within the policies which target them, certain social programmes have promoted youth enterprises in the so-called ‘new job niches’ in the service sector, particularly in reference to cultural expression. Many of these programmes are decentralized and are linked in various ways with local government, which is particularly active in the field of cultural policy and development of artistic expression among youth. They are also characterized by motivation of the young themselves. There is little evaluation of this type of initiative in terms of its relation to the integration of the young into the working world, who participate in training and collective enterprises. For example, the programme ProJovem de Brasil includes this type of strategy.

Which programme for which young person? Consistent segmentation of actions

Obviously, the general context of the job market, the distribution and value of qualifications in the job market, particularly at secondary level, together with the years of schooling and specific training, are essential departure and arrival points in any programme. Depending upon the conditions of the context, the adaptation between the educational and social profiles of the young people, their expectations, and the training and support strategies are key factors in the results of the programmes. Given the variations between and within
countries, it is almost impossible to establish ‘what works for which young people’, beyond certain agreements reflected in the above approaches.

The actions are usually based on the profile of the young people to whom they are directed, generally aimed at improving opportunities for poorer people who have not completed basic secondary education. This includes the poorest, living in urban or – less frequently – in rural marginal areas, who were not able to enter and/or who dropped out from secondary school, and also includes – in a few cases – young people with secondary education from low social and cultural sectors who, without any support or networks, have their hopes of finding better jobs dashed in spite of the greater efforts made to improve their education. Many programmes support the adoption of gender balance in terms of goals or even the transversal gender approach (although this may be at early stages in youth programmes). Some programmes include young people and adults.

The broad classification of the public targeted by the programmes leaves little room for the consideration of specific groups. Only some recent projects consider specific groups, such as displaced youth, young people who have encountered problems with the law, and rural youth. Less common are programmes that consider the needs of indigenous youth or those of African descent, with comparatively lower levels of educational achievement, lower quality jobs, and lower levels of access to resources and recognition. The situation of young women in these minority groups is particularly critical, as they suffer from gender and ethnic discrimination. However, programmes directed at this group are exceptions. Young women with children are another group that rarely receive attention.

Young people with secondary education from poor households are not usually the target of public initiatives, although they face problems with employment. This group manages to get onto programmes by entering in the programmes’ focused in poverty sectors.

A number of tensions arise from this fairly general and indifferent characterization of the target population.
Young people in better social and educational positions tend to displace poorer youth in access to the mechanisms (Caillods, 1998). Except for programmes with a geographical approach – that is, those that consider young people from a particular town or rural area – a selection and auto-selection process tends to take place with the result that training bodies tend to select those who are, in theory ‘more likely to last throughout the project’. Young people with higher social capital are usually more aware of the opportunities for access to a mechanism and more able to follow them through. For example, as the employment opportunities for poorer youth who manage to complete secondary education are limited, they often enrol on programmes that offer an internship, although this is designed for young people with lower profile levels, again demonstrating the limits of a set of programmes that fail to form a coherent policy to help youth job placement.

Another tension is linked to assumptions constantly made about the reasons why young people take part in programmes and strategies that rarely consider these reasons. The factors motivating poorer young people to turn to training cannot be taken for granted. Reasons range from a search for stability and sociability, an attempt to continue studying, to obtaining a subsidy while unemployed. Participants may or may not be interested in the training itself. However, other young people, with higher levels of education, hope that training will provide them with the bridge to quality employment.

There is also a weak overall vision of young people, highlighting the problem of a low level of skills while failing to take into consideration the social and cultural issues that are of importance to adolescents and young people. Nor does it consider the range of social and educational situations that define poorer youth in terms of geographical, local, and family contexts. Although training has generally been linked to other training or cultural measures, this criterion has rarely been considered in either the selection or the evaluation of the courses.

Lastly, the greatest tension is related to the provision of quality training and greater equality in these programmes. The training offered even from
within these programmes appears differentiated. Programmes promoting the development of micro-enterprises as part of the social programmes are directed at the poorest urban or rural youth who encounter the greatest problems in finding quality employment. However, programmes with internships or job placement support in the formal market are reserved for young people in relatively better conditions. Although there is some agreement that for young people with lower social and educational levels quality interventions should last longer and be more integral, the number of programmes offering a clear conceptualization of the different strategies according to the profiles of the young people taking part is limited. One positive example in this respect is the Projoven programme in Uruguay, which, over 11 years, has developed a variety of broader and longer training programmes according to the target youth populations. Broadly speaking, high-level training directed at integrated sectors tends to run alongside competitiveness while differences remain in quality and the opportunities offered by employment and social programmes to fight against poverty (Table 4.5).

### Table 4.5  Public objective of the programmes

<table>
<thead>
<tr>
<th>Public objective</th>
<th>No. of programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor youth</td>
<td>34</td>
</tr>
<tr>
<td>Youth/unemployed youth in general</td>
<td>18</td>
</tr>
<tr>
<td>Youth and adults</td>
<td>11</td>
</tr>
<tr>
<td>Gender approach (transversal or directed at women)</td>
<td>10</td>
</tr>
</tbody>
</table>

Note: Total number of programmes analysed: 52.

#### 4.5 Some thoughts on possible lines of action

Clearly there are multiple reasons for problems that are broadly linked to the countries’ development and growth strategies. In a region where social inequalities are polarized and poverty levels have increased, the programmes implemented have hardly succeeded in consolidating a system of education, training, and social care for young people with fewer opportunities. The new strategies described above aim to overcome the more limited visions
of vocational training, with increased links to formal education and the employment world and a more equal distribution of job opportunities. On the whole, the newer programmes tend to rely more heavily on the institutional nature of vocational training.

The macro-economic environment is naturally the main factor affecting the improvement of job conditions for young people. Production training measures, the expansion and quality of education, the demographic transitional stage of the country, the characteristics of the regional and local economies are some of the key variables that determine the scope and direction of the interventions. In addition, even with higher quality training, the lack of available jobs and the poor quality of those that do exist is not resolved.

There is increasing agreement that the number of years spent at school and access to a good primary and secondary education are key factors in obtaining quality employment. Many recommendations are therefore linked to policies to improve quality and educational retention rates and to provide opportunities for those people who have been temporarily excluded from formal education to complete their education. The links between educational programmes and the various forms of training (formal schooling, vocational training, workplace) should be clearly created and/or strengthened to promote the relevance and social significance of education with respect to youth job placement.

There is general agreement on the need to promote active employment policies, and more specifically on the need for active policies aimed at young people. Some of the tasks required include the promotion of a regulatory framework for on-the-job learning programmes at work, supervision, and certification of training, and the provision of training incentives by business. The formulation of isolated programmes should be improved to promote coordinated policies at various levels.

The programmes and/or measures specifically directed at improving youth job placement need to be coordinated in such a way that they can provide support for placement, be directed towards categories selected by
Approaches and strategies for the vocational training of unemployed youth in Latin America: has anything changed in recent years?

young people with consideration for their varied nature and specific problems, and be carefully assessed and adjusted for particular niches or sectors of the economy. On the whole, vocational training programmes directed at young people facing problems with employment should:

- be dual – that is, they should include a training component and a learning-at-work component (such as internship or practical training), working in coordination with the production world and with specific job opportunities;
- have an integral design, including the development of technical, basic, personal, and social competencies;
- provide support and advice during the job placement process;
- be linked to other formal education services, vocational training, employment, and social services;
- only for carefully selected population groups, it would be advantageous to encourage the promotion of self-employment and the creation of small enterprise, backed by financial, training, and advisory services.

The need for broad approaches in the policies, beyond one-off training programmes is usually mentioned. The emphasis varies according to the forms of synergies between the actors. There is increasing evidence to suggest that effectiveness is related to integral approaches from an institutional youth protection network. Others emphasize that intersectoral strategies should improve levels of coordination. Both questions were recommended many years ago, although with major political and institutional obstacles to achieving them.

Are there any policies for the transition from education to employment in the region? Few sustainable programmes have been found. While these may, in some cases, produce good employability results, they do not offer an articulated policy. One matter that remains unresolved is how to systematically strengthen the links between the different services and programmes. Formal education and vocational training in Latin America are disjointed circuits that do not coordinate their functions and resources, are dependent on different
areas of public or private administration, and are far from forming a system (Jacinto, 2002b). Nevertheless, different positions may emerge with respect to the institutional nature of training. The question is based on the fact that many flexible circumstantial programmes offer training on unconsolidated institutional bases. Should a training system be based on the certification of competencies? Many initiatives are directed towards this point, but with many obstacles, as indicated by Vargas in Chapter 5.

Greater coordination between agencies and with national actors; the effective formulation of integral and sectoral approaches; the strengthening of management capacities and the involvement of the actors; consolidation of public-private alliances; improving fragmented training for work policies: These are just some of the challenges.

The lack of coordination among the different spheres of government entails complex questions concerning the structure of public policies linked to the social, political, and cultural history of the region and especially of each country. Participation of various ministries and other organizations in vocational training would not in itself pose a problem, if it were not for the parallel nature of actions and tensions hindering progress in the contribution towards integral development visions. The concept of lifelong learning, which somehow systematically links training opportunities in formal, non-formal, and informal spheres, has huge potential for improving coordination and advancing the coherent construction of education for development.

The need to move towards greater coordination is not merely a question of efficiency and efficacy. It is also linked to equity, and thus forms part of a larger area: that of building a continuous education system that responds to social, cultural, economic, and technological transformations and enables access to different lifelong learning options.
5. THE DEVELOPMENT OF SYSTEMS OF COMPETENCY-BASED TRAINING AND CERTIFICATION IN LATIN AMERICA: A GENERAL REVIEW

Fernando Vargas Zúñiga

5.1 The advent of the employment competency approach in the region

In the 1980s the Mexican government embarked upon a major reform of the training and occupational training systems. The Labour Competency Standardization and Certification Council (CONOCER) was created, marking the arrival of the labour-competencies-based approach in vocational training in Latin America and the Caribbean. In 1996, ILO/Cinterfor took part in the organization of an international seminar in Guanajuato, Mexico, at which experiences from around the world were presented. The philosophy and objectives of CONOCER were introduced at the seminar and to training institutes in the region.

Since then, the application of the competency-based model in training and certification has extended throughout the region. All the institutions specializing in this area now apply the competency approach at different levels and in different ways.

There are two types of approaches. The first emerges from the evident exhaustion of the strategies, materials, and pedagogical practices based on traditional training approaches. These were encouraged by Taylorist approaches to the analysis of work, now considered outdated due to changes in technology and its impact on the organization of work. In this case, applications were directed at overcoming obsolescent curricula and teaching materials.

The second approach is based on the methodological influence of the approach, its sources, and its conceptual inspiration. Naturally, it is related to the application of the English model in CONOCER, together with its
established theory and new inspiration. This was very closely related to the choice of institutional models for competency training and certification.

**The competency-based approach as a formula: superseding the Taylorist approach in vocational training**

The training programmes in the majority of training institutions were drawn up in the 1970s and 1980s. Their relevance was questioned not only because of the major changes taking place in business in the 1980s, but also due to the conceptual base that assessed the needs of employment through the analysis of tasks and operations from the Taylor model.

The introduction of new technologies in manufacturing processes and in information and communication processes (ICT), together with new forms of business organization, led to the emergence of other ways of assessing work. These tended to focus more on results than on the tasks and operations performed.

The most frequently applied concepts for analysing work in the traditional model included tasks, operations, times, movements, and methods. However, with the current competency-based analysis, particularly in methodologies such as that of functional analysis, the focus was on results, quality of performance, the relation of each activity to the final objective, the criteria for implementation, and evidence of performance. These factors all come under the heading of basic, generic, or specific competencies. The measurement of work time and space ceased to be the focal point of the analysis. Now studies looked at the individual’s knowledge and skills and his/her ability to successfully apply them.

At the height of the Taylor and Ford periods, organization and production technologies shaped the skills and abilities of the workers. Now, with the present service-based industries, microelectronic, information, and telecommunication technologies have transformed the required competencies. Clearly, the features of the prevailing forms in the division and organization of work serve to shape the package of competencies required.
concept has been of great assistance in identifying the wide range of new employment characteristics derived from its extraordinary wealth and specialization. Labour competency aims to incorporate the set of skills, knowledge, and understanding currently required for satisfactory performance on the job.

One significant point for the analysis of work in the move from an industrial society to a knowledge society lies in the fact that in the former approach the so-called employment ‘virtues’ were very much in demand. These were significant in traditional personnel management techniques. Discipline, punctuality, and obedience were viewed as key elements in the highly specialized Taylor concept of subordinate employees. However, in the age of knowledge, new virtues have been depicted in a demand for competencies. These include capacity for analysis, ability to work in teams, negotiation skills, ability to take risks, lifelong learning, problem-solving, and other skills. These are the more human characteristics of an employee and involve the application of knowledge and the use of social skills and motivation. The necessary hard core of ability is not a part of these skills (Table 5.1).

From the ‘English’ model towards a ‘Latin American’ model

The first applications of the labour competency approach drew on the institutional character established in England in the 1980s. This led to a series of discussions and debates that still prevail in some countries, particularly concerning the way the English model stressed the separation of roles between trainers and assessors, who were, in turn, separated from certifiers. Nevertheless, as will be seen below, a number of experiences demonstrated that foreign models cannot be transplanted without prior analysis and adaptation to the true conditions of the new situation.
Table 5.1  New characteristics in the organization of work and its effect on competencies

<table>
<thead>
<tr>
<th>BEFORE</th>
<th>AT PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hierarchical organization</td>
<td>Organization of work is initiated by the workers</td>
</tr>
<tr>
<td>Imposed objectives, limited responsibility</td>
<td>Participation in the conceptualizing of projects</td>
</tr>
<tr>
<td>Predefined positions</td>
<td>Flexibility in activities and roles</td>
</tr>
<tr>
<td>Limited understanding of the general framework of the work process</td>
<td>Understanding of the entire process</td>
</tr>
<tr>
<td>Specialized work with traditional technologies</td>
<td>Complex work with horizontal and vertical enrichment and support of the IT sector</td>
</tr>
<tr>
<td>Management of production in a static environment</td>
<td>Management of information in a constantly changing environment</td>
</tr>
<tr>
<td>Work based on physical force applied to materials or the manipulation of objects</td>
<td>Intellectual work based on the management and transmission of information</td>
</tr>
<tr>
<td>Routine, repetitive situations and predictable problems</td>
<td>Intellectual speed in terms of perception, reaction and coordination</td>
</tr>
<tr>
<td>Predominance of specialized manual workers</td>
<td>Management of unpredictable situations which require an accumulation of experience</td>
</tr>
<tr>
<td>Work driven by orders and specifications</td>
<td>Predominance of competent workers, technicians, engineers and management staff The work requires independence, initiative, responsibility and creativity</td>
</tr>
<tr>
<td>Work is supervised</td>
<td>Work is self-evaluated</td>
</tr>
<tr>
<td>Separation between thinking and action</td>
<td>Integration of thought and action, problem solving</td>
</tr>
<tr>
<td>Individuals are adapted to the requirements of the machines</td>
<td>Adaptation to respond to the requirements of each situation</td>
</tr>
</tbody>
</table>

Source: Developed by author and based on Delcourt, 1999.

Undoubtedly, the region has learnt a major lesson. The renovating capacity of the competency-based approach is not obtained by merely copying the original institutional structure. Performance principles based on skills, knowledge, and comprehension must be applied.
At a quick glance, there are a number of national training institutions that chose to modernize their curricula based on competencies (INTECAP, SENATI). Others have designed mechanisms to recognize previous learning or certification (SENCE, INA). In other countries, the training and certification services have been developed together, based on the leadership of a national institution (SENA, SENAI).

The role of ILO/Cinterfor in the development of the competency-based approach was evident from the start with its participation in the organization of an international seminar in Mexico. All the institutions in the region were informed of the model and its global application. The seminar also looked at the application through CONOCER, the newly created institutional structure. Relevant global experiences and literature were made available through the documentation services at Cinterfor, together with technical cooperation services. The Centre’s initial efforts focused on publicizing the various stages of the competency model, and its method of application was given a more open approach, without suggesting one model or another. It was soon observed how the training institutions used their extraordinary capacity for change to embark upon the renovation processes implied by labour competency.

In addition, a joint project between ILO/Cinterfor and the International Training Centre (ITC) of the ILO in Turin was designed to offer training courses for the technicians and managers of the vocational training institutions. For nearly 10 years, the ILOITC offered training at a rate of approximately two sessions (attendance required) per year in the region. As the ITC has built up experience, it has perfected a training programme for trainers based on labour competencies and a training programme for the management of human resources through competencies directed at those working in these areas in all kinds of companies.

Starting from references almost totally focused on the progress of the experience in England, various alternative methodologies have been perfected, covering the entire range of activities within the competency-based approach.
Stages or phases in the labour competencies approach

One common denominator throughout has been the recognition that competency-based work requires the development of several phases or stages: identification, standardization, training, and certification. Table 5.2 shows the various methodological and conceptual alternatives applied in the region for the different stages of the competency-based model.

From occupational analysis to the identification of areas of competency

The mechanisms for identifying competencies have involved the renewal of the occupational analysis techniques used to date. The change in focus from a detailed study that carefully identified the steps, tasks, and operations to an approach that has focused on the identification of competencies designed to obtain a result at work required considerable training of technicians, facilitators, and teachers.

Table 5.2 Various methodological and conceptual alternatives applied in Latin America

<table>
<thead>
<tr>
<th>Phases of the model</th>
<th>Methodologies or conceptual developments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification</td>
<td>Various mechanisms: technical groups, sectoral tables, technical committees Different methods: DACUM, AMOD, SCID, Functional Analysis.</td>
</tr>
<tr>
<td>Normalization</td>
<td>Norms based on the English model Adapred norms Profiles of non-normalized competencies</td>
</tr>
<tr>
<td>Training</td>
<td>Modular Distance By project In virtual environments</td>
</tr>
<tr>
<td>Certification</td>
<td>Of the first part Of the third part</td>
</tr>
</tbody>
</table>

The methods used to analyse the work have revealed a variety of models little known before. These include the DACUM method (Developing
The development of systems of competency-based training and certification in Latin America: a general review

a Curriculum), AMOD (A Model), and the SCID (Systematic Curriculum Instructional Development), and the Functional Analysis model perfected in England. This is perhaps the preferred model thanks to its methodological scope and its new approach to tackling the employment world.

Several variations of the DACUM, AMOD, and SCID models emerged as a number of training institutions applied the methodologies. Spanish versions of the functional analysis methodology were introduced from materials used by CONOCER in Mexico and the training programmes were carried out by technicians from England in countries such as Mexico and Colombia. In 1977, the ITC also introduced a competency-based training course for training institutions in Latin America and the Caribbean.

The identification of competencies and competency standards

A significant component to emerge from the influence of the English model in the identification of competencies was the advent of the competency ‘standard’ concept. The idea of a standardized system was inherent to the intuitional structure in England and to the structure introduced with CONOCER in Mexico. However, the training institutions identified the contents of work in products such as ‘profiles’ or ‘occupational descriptions’. This led to the understanding in many national cases in the region that the development of competency training involved a standardized system – that is, having competency standards and a national body to govern the standardization of labour competencies.

For several years, the development of competency standards was based on training programmes and the interpretation of the English methods. The excessive detail involved in the standardized models was quickly perceived when developing experiences such as those from CONOCER and the establishment of a standardization technique frustrated many attempts to join the training world. The drawing up of standards appeared to be a complex task that could prove too expensive to fulfil the promise to reform the competency approach.
The institutional strength of the region appeared as a new model here, and its methodological approach gradually spread from a single methodological application to a variety of applications and variants. There was heated debate between the more ‘purist’ followers of the functional analysis model and the ‘adaptors’ or ‘innovators’ of this methodology.

A number of tools, manuals, and guides are now available on the web for use with the Functional Analysis, DACUM, AMOD, or SCID models. The ILO/Cinterfor have a section on labour competencies and a ‘tool bank’ with links to various instruments. Pioneer publications include those by Mansfield and Mitchell (1996) and by Mertens (1997). Since then, a number of application manuals have been produced by INTECAP, SENAI, SENA, and SENCE, among others. The increase in and spread of knowledge took place in less than 10 years, and there are now thousands of Latin American operators able to perform functional analysis or draw up a DACUM matrix.

**Actors in the implementation of training and competency certification**

In the last ten years, the competency-based approached has expanded rapidly. No other innovative action in the recent history of vocational training might have had such an impact as the adoption of the competency approach. Moreover, a number of international financial organizations for development or cooperation incorporated the development of labour competency models at national, local, or sectoral level in their projects.

Vocational training is not the only area affected by this new approach. In many countries, programmes to develop the competency approach have also been introduced in primary training and higher education. One of the factors that most supported an employment-competency-based view of education was the application in Latin America of international standardized tests such as PISA.

The results of the tests indicated the need to establish standards for educational results that went beyond the mere measurement of years of
schooling, providing more in-depth studies of the quality and effectiveness of education. For example, comparisons carried out by PISA enabled performance ranges to be established for the evaluation of competencies in language, mathematics, and science. These tests provided a number of Latin American countries with a reference standard for the performance of their students in relation to students from other parts of the world.

However, the vocational training institutions questioned the competencies that their programmes were required to develop in participants. This basic question has directed the reformulation of the work process in the majority of these institutions. The establishment of training requirements, sometimes based on the analysis of job creation (destruction) in a fundamentally quantitative approach, turned into an analysis of the job content and of the competencies required.

Curriculum design inspired by occupational descriptions based on the Taylor interpretation of work gave way to curricula based on the competencies to be developed during the training process. This was by no means an easy step to take, either during the theoretical discussions or during the implementation. Looking at the region today, almost all the training institutions have adapted their training curricula, to a greater or lesser extent, to the labour competency approach. Some action groups undertake competency training and/or certification, usually carried out by the vocational training institutions and the ministries of work and education.

In order to improve the efficiency and quality of their programmes, the vocational training institutions focused on developing better training programmes aimed at identifying the labour competencies required at work. Labour competency certification services have been designed and are offered in some cases.

The Ministries of Work and Education realized the need for an instrument for the public recognition of occupational skills to facilitate the interchange between supply and demand and to offer greater transparency in labour relations. On the whole, the certification process has paved the way as an
Recent trends in technical education in Latin America

efficient complement for empirical learning and the competencies acquired on the job. The process involves a diagnostic evaluation of the competencies that clearly defines not only what has been achieved but also the requirements for the acquisition of new competencies in accordance with a previously defined occupation.

**Certification of competencies: a promise still to be specified**

Labour competency certificates represent the true and proven skills of employees irrespective of the way in which they were acquired. They are highly relevant to work and allow potential employers to clearly relate to the labour competencies that the holder of the certificate has demonstrated during the certification process. Competency certification in the region is increasingly included in human resource management. Several firms in competitive and highly globalized sectors are turning to the definition of performance standards for a variety of jobs. Where the production and/or quality specifications are very sensitive to global competency, there is a tendency to look for qualified personnel. This is the case for production processes involving welding, or associated with information technology and telecommunications, the automobile industry, the construction industry, and, more recently, areas associated with occupational health and safety and environmental conservation.

Labour competency training and certification have proved to be important for employees and their organizations. In the information and knowledge society, a certificate is an efficient means of assessing the knowledge and skills held and applied by an employee beyond and above academic achievement, as well as for assessing job experience. It can be an excellent instrument for directing efforts in training and for specifying the tendency to include vocational training in the area of negotiation. Good vocational training that permits open access to the training requirements detected in the labour competency certification process is an objective sought throughout the region. However, it is probably the objective that still requires the most work.
There are a number of areas still to be investigated for the full development of the competency certification mechanisms in the region. These include:

- Coordination of the certification systems with education systems. Low levels of formal education often prevent the employee from advancing in the development of competencies. Some countries are trying to raise schooling levels and the coordination of certification services with educational services. This is the case in Chile with the Chilecalifica programme, or the SENA programme in Colombia in coordination with the Ministry of Education, or the New Industry Programme run by SENAI in Brazil.

- The provision of complementary training services that enable workers to continue to develop competencies after deficiencies or areas to be developed have been identified during the certification process. The need for flexible enrolment, training, and graduation systems that are almost tailor-made to meet each particular need poses a challenge to institutions. Traditional group responses in training have moulded administration and management in centres and schools. These are now required to meet the needs of workers in the certification process who need to develop a particular competency. Coordination with training mechanisms in the firm is also crucial. Although there are a number of successful experiences in countries including Brazil, Chile, and Colombia, these services still need to be provided on a larger scale.

- Accessibility to certification services based on criteria that permit the clear definition of payment according to assessment and certification. This involves the cover of unemployed and poorly qualified personnel – precisely the group that is most in need of training and certification. In this respect, there is a broad range of experiences, from the provision of a free service, as is the case with SENA in Colombia and INA in Costa Rica, to others that include assessment-related costs payable by the candidates. On the whole, the assessment programmes are expensive, and some Ministries of Work – as, for example, in Chile – have set up
financial cover for part of the certification costs. (This can be seen in the law that established the National Occupational Certification System.)

- Participation of employees and workers in certification systems and processes is a factor that can and should be improved. Experiences include those from the Ministries of Work in Brazil and Argentina and training institutions such as SENA, SENAI, and INA, which have promoted the development of certification systems. Competency standardization organizations enjoy the participation of employees and workers. However, this still needs to operate on a larger scale, with more attention to demand. This will help to confirm the capacity of the social actors to influence the process, both in defining competencies and in the mechanisms for candidate access and the processes that ensure the validity of the certificates.

5.2 Ministries of Employment in competency-based training

Gradually, concern to improve the conditions of employability of human talent and to create national frameworks that recognize the competencies acquired on the job have led to greater involvement of the Ministries of Employment and Education in the introduction of training models that meet needs in a framework of active employment policies.

Public concern for the generation of training programmes with a high relevance to employment and employability in a production labour environment was significantly developed in the region towards the end of the 1990s. Initiatives in several countries tended not only to increase the training on offer but also to organize frameworks or nationals systems based on competency standardization, training, and certification.

Purely for quantitative reasons, and aimed at improving the situation of groups that were vulnerable to unemployment, another viewpoint was analysed. Without rejecting the first approach, this perspective incorporated a qualitative factor directed more towards obtaining useful qualifications during productive life and certifiable and transferable competencies, rather than following short fragmented courses that are not easy to follow.
In addition, secondary-level education is being called upon to largely resolve the age-old subject of disassociation between academic training and training for employment. More and more countries, in their educational reform programmes, are adopting the approach of a secondary education focused on the generation of a broad range of competencies and, therefore, with low levels of obsolescence and more applicable to life at work.

Technological education is generating a connection between education and training. These concepts, given the new organizational realities in the world of employment, give rise to more and more diffuse differences. The bases for technical training with a scientific foundation are largely required for new technologies and production processes that have introduced instruments and equipment on a large scale. The use of such equipment requires programming, calibration, parameter analysis, and abstract thought.

A more generalized approach directed at training in competencies with a scientific and technological base, without excluding advancement to higher levels, seems to be winning against the use of technical education aimed at training workers in narrow occupational fields. More and more, the idea prevails of opening a lifelong line of education that minimizes the difference between types of education and recognizes that a varied range of competencies is acquired, but always designed more to be an intellectual asset to the worker.

A summary is given below of some of the experiences introduced by the Ministries of Employment.

Argentina

The Ministry of Labour, Employment and Social Security (MTEySS) has defined a model for the development of human resources aimed at encouraging competitiveness and social cohesion. The model uses institutional devices to guarantee quality in the vocational training of the workers and the recognition of the qualifications acquired throughout their vocational life.
Devices designed for this model include incentives to complete studies, vocational training, quality of training, and labour competency standardization and certification. This has led to the establishment of a national system of ongoing training. The objectives of this system include the organization of a lifelong training programme linking access to, permanence in, and completion of formal studies and permanence in a job experience with training content and the improvement of the development and public and sectoral recognition of labour competencies.

As part of the national directorate for guidance and vocational training, the Secretariat of Employment for the MTEySS has created the Quality of Employment and Vocational Training Programme, in order to foster the application of efficient devices in the implementation of vocational training and employment policies (for further information see www.trabajo.gov.ar/calidad/). The quality programme has developed and implemented mechanisms for technical aid that were first applied as part of the Plan Integral de Empleo Más y Mejor Trabajo through the Programa Sectorial de Calificaciones (Sectoral Programme of Qualifications) and the Componente de Formación del Programa Jefes y Jefas de Hogar Desocupados (Training Component of the Unemployed Heads of Household Programme).

Quality involves the set of methodologies and management criteria linked to labour competencies, together with the training and employment institutions related to the Labour Competency Certification process.

The functions of the quality programme include:

• assisting in the institutional development of the activity sectors;
• creating devices that contribute to institutional strengthening and to the recognition of workers competencies;
• providing information on the situation and development of the training and certification institutions and the qualifications required;
• developing a benchmark for the training and employment institutions;
• assisting and monitoring the training institutions in their supportive processes.
The experiences of the MTEySS in competency standardization and certification were strengthened based on the implementation of the programme to certify labour competencies through the design of the competency certification process in four sectors: graphic printing, metallurgy, automobile mechanics, and traditional pastry and cake making.

The objective of the project was to establish the institutional and methodological bases for developing a national system for the certification of labour competencies, through pilot experiences in certification and training based on the labour competency approach.

The project covered five areas in the System of Labour Competency Certification:

- selection of the profiles and/or competency units to be assessed and certified in each occupational sector analysed. This area is currently being identified and developed in each of the sectors;
- development of tools for the assessment of the competency units corresponding to each profile;
- development of the competencies required for a competency assessor to be accredited as such;
- development of the procedures required to perform assessment based on transparent and legitimate competency standards;
- design of an institutional structure to be promoted in each sector for the development of a system for the assessment and certification of labour competencies.

Progress in the competency standards developed up to 2003 is shown in Table 5.3.

46. The project is co-financed by the IDB/MIF and the participating organizations: Union of Automobile Mechanics and Associated Auto Transport Workers; Argentine Federation of Pastry, Cake, Ice Cream, Pizza and Biscuit Makers; Association of Metallurgical Industries of Rosario; and the Gutenberg Foundation for the Graphic Printing Sector. The projects were implemented between 2001 and 2006.
Table 5.3  Training and certification of competencies programme.
Developed norms

<table>
<thead>
<tr>
<th>Graphic industries</th>
<th>Automotive</th>
<th>Artisanal pastry-making</th>
<th>Metalworking</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Print machine worker, flexography</td>
<td>• Maintenance and repair of electronic systems</td>
<td>• Master pastry chef</td>
<td>• Hot plate cutters (manual and mechanical plasma methods, manual and mechanical oxigas)</td>
</tr>
<tr>
<td>• Combined press, offset, gravure</td>
<td>• Mechanics for: Air-conditioning systems</td>
<td>• Official pastry maker</td>
<td>• Innovative welding (MIG-, SMAW and GTAW processes in tubes or metal sheets)</td>
</tr>
<tr>
<td>• Digital graphics technician</td>
<td>• Automatic transmissions</td>
<td>• Pastry-making assistant</td>
<td>• Weld braising of electrical conductors</td>
</tr>
<tr>
<td>• Slide mounter, Flexographic plate maker</td>
<td>• Installation of alarms and audio systems</td>
<td>• Official estimator</td>
<td>• Lathe operator</td>
</tr>
<tr>
<td>• Guillotine cutter</td>
<td>• Conventional systems of fuel supply and ignition</td>
<td>• Catering cook</td>
<td>• Milling machine operator</td>
</tr>
<tr>
<td>• Cost analyst</td>
<td>• Conventional systems of diesel injection</td>
<td>• Fast-food cook</td>
<td>• General molding and shell molding operators</td>
</tr>
<tr>
<td>• Quality controller</td>
<td>• Conventional brake systems</td>
<td>• Waiter</td>
<td></td>
</tr>
<tr>
<td>• Technical sales person</td>
<td>• Front Wheel drive</td>
<td>• Pastry sales person</td>
<td></td>
</tr>
<tr>
<td>• Framer</td>
<td>• Transmissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Motors</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Training and certification programme. Argentina.

Brazil

In 2003, the debate on the possible coordination of a national system of certification in Brazil was revived. This would not only involve transparent and legitimate mechanisms for the recognition of worker competencies, but also the need for a national framework of qualifications as a national reference.

Positive signals and a number of activities in favour of this initiative emerged from the Ministry of Labour and Education and from the Vocational Training Institutes (VTI). Brazil has a solid legal foundation, and this has helped to introduce competency recognition programmes. In 2000 and up until 2002, the ILO office in Brasilia, in collaboration with Cinterfor/ILO
and the Ministry of Labour and Employment, initiated actions as part of a project to establish the possibilities for a national system.

In addition, more recently, SENAI, the National Vocational Training Institute for Industry, has taken part in the updating of the Brazilian Classification of Occupations. This was also proposed as a tool by the National Council for Education. As described in the section on training institutions, SENAI also introduced a competency certification system (Box 7).

Between 1998 and 2001, a project of the Secretariat for Vocational Training (at that time SEFOR) of the Ministry of Labour and Employment (www.mte.gov.br), with the technical support of the ILO, aimed at studying global experiences in certification, providing elements for a national debate as part of a reference group comprised of representatives from the chambers of commerce, trade unions, and public and private training bodies, and jointly establishing a system to provide certification mechanisms designed to improve the relevance of training and to raise the level of performance and employability of the labour force.

The project has made considerable progress and has helped to document the most significant competency training and certification experiences in order to prepare a methodological manual on the analysis of labour competency and employment.

At present, the Ministry of Labour has a Public Qualification Policy as part of its labour, employment, and income policies. The policy particularly
seeks to link primary education and vocational training. As a result of the inter-ministerial commission directly called by the Central Government in 2005, and following extensive consultation and participation, a document containing the basic directives for a National Certification System was drawn up (www.mte.gov.br/pnq/proposta_governamental.pdf).

This experience led to a significant exchange of viewpoints and methodological discussions on certification processes and mechanisms. Since 2002, and encouraged by the Inter-Ministerial Commission, a team of representatives from the different institutions have been working on perfecting the Qualification System. The Commission’s work has led to the preparation of a glossary of terms and the knowledge and comparison of different certification models in use in Brazil and around the world.

To sum up, Brazil has not yet consolidated a national model, and a number of successful experiences backed by different public and private institutional actors stand out. Experiences in the major private sectors, associated with international performance standards for highly specialized processes and jobs such as precision welding, have become more apparent thanks to Brazil’s position as a global competitor.

SENAI’s integration into the private sector helped to develop its certification system. Some private organizations such as the Brazilian Maintenance Association (ABRAMAN) have been running certification programmes for several years. Other examples can be found in the automobile, metalworking, health, and tourism industries.

More efforts in the development of a national approach are desirable in this area. This would permit the consolidation and coordination of different initiatives around a general framework, enabling better coverage, preservation of equity, and access criteria.
The National Service of Training and Employment (SENCE) in Chile and competency training and certification

The central strategy for vocational training in Chile focuses on a system by which the Ministry of Labour, through the SENCE, administers a ‘tax allowance’. This is a fiscal incentive mechanism through which businesses can recover investments in employee training, by subtracting the sum of the investment from the total annual income tax payments. The sums recovered may not exceed the equivalent of 1% of the monthly salary. Businesses select their training suppliers from ‘technical training organizations’ (OTEC) accredited by SENCE in order to benefit from the allowance for training costs (Box 8).

Box 8. National Service for Training and Employment (SENCE)

The National Service for Training and Employment (SENCE) is a decentralized state technical body linked to the government through the Ministry of Labour. Its mission is to contribute to increasing national productivity by encouraging labour training in businesses and for low-income citizens.

This is done by using a tax allowance that the government offers to businesses for the training of personnel, together with a subsidiary measure, using a programme of training grants financed with public resources.

Source: www.sence.cl

SENCE also manages the funds used to contract the training from a broad range of offers from OTEC. The national funds applied to training are usually distributed in ‘social programmes’ directed at populations vulnerable to unemployment, workers who have been laid off or are in their first job, and those who have low levels of education.

The development of a labour competency training and certification model in Chile has followed the objectives and goals of the ‘Chilecalifica’ (www.chilecalifica.cl) programme fairly closely. These include the creation of the National System for Labour Competency Certification. Based on the
concept of competency standardization, this system allows workers to certify competencies at work, without needing to demonstrate where or how the competencies were acquired.

A Competency Framework has also been established to provide a set of standards for occupational performance that include new requirements for knowledge, skills and abilities for the world of employment.

The starting point for defining the Labour Competency Standards and Occupational Profiles adjusted to the requirements of the production sectors consists of identifying the occupational areas where the workers’ capacity needs improvement. The sectors were studied to identify a profile for each production sector and sub-sector and to have a firm base for providing guidance in specifying labour competencies.

An occupational profile based on competencies is a group of standards or labour competency units that defines the activities or duties of a trade or job. The occupational profile describes:

• the general area or scope of the trade or job;
• the competency units associated with the profile;
• the competency context, referring to the conditions and situations in which the candidate must prove him/herself capable of performing a particular task;
• the direct and indirect evidence demonstrating that a person is able to carry out the activities defined in an occupational profile according to the expected criteria.

The competency-based occupational criteria reflect a group of complete trades rather than isolated activities or tasks. Therefore they have added value in vocational training and the preparation and management of human resources in business. In addition, they can be used for evaluation and certification (for further information see www.competenciaslaborales.cl). The latest results of the system listed 502 labour competency standards developed, more than 9,000 individuals trained, and more than 20,000 labour competency certificates awarded.
In Chile, the trades unions have acted as certifying bodies, thus guaranteeing the validity and business recognition of the certificates obtained by workers.

Competency Standards have been developed in the following sectors:

- aquaculture/fish farming;
- agro food;
- agriculture;
- food;
- gas/electricity;
- computer technology;
- logistics;
- metalworking;
- mining;
- tourism;
- wine producing industry.

The ‘Chilecalifica’47 programme, which aims to create a lifelong education and training system, is to be highlighted. A joint initiative between the Ministry of Education and the Ministry of Labour and Social Welfare through the SENCE, it has also received support from the Ministries of Economy and Agriculture and the Chile Foundation. This system created the Special Programme of Primary and Secondary Levels for Adults developed by specialized educational establishments. The programme is free and flexible, permitting students to study at their own rate, within their own conditions and time. It certifies studies equivalent to fourth, sixth, and eighth grade in primary education and the first and second stages of secondary education, and is legally recognized.

In addition, the education and training system aims to promote training with a clear approach towards true market requirements, using new information technologies, and encouraging the use of tax allowances.

---

47 The objectives included the creation of a ‘National System of Labour Competencies’. It was started in 2002 and ended in 2007 and was financed by the World Bank and the Government of Chile.
One of the principal projects of the system is the creation of a ‘National System of Labour Competency Certification’. The basic law is in the process of being legislated.

**Mexico and its pioneer experience with the CONOCER programme**

The most significant experience in this country revolves around the creation of the Occupational Competency Standardization and Certification Council (CONOCER). This was a pioneer event in the region and was certainly the first of its type in Latin America. The influence of CONOCER on the rest of the continent was huge, and the cooperation it provided led to the start of actions with respect to labour competencies in a number of countries (*Table 5.4*).

**Table 5.4  CONOCER: Most widely certified skills**

<table>
<thead>
<tr>
<th>SECTOR</th>
<th>Number of certifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information technology</td>
<td>57,407</td>
</tr>
<tr>
<td>Clothing</td>
<td>20,718</td>
</tr>
<tr>
<td>Tourism</td>
<td>13,737</td>
</tr>
<tr>
<td>Sales</td>
<td>12,976</td>
</tr>
<tr>
<td>Occupational health</td>
<td>8,461</td>
</tr>
<tr>
<td>Energy</td>
<td>6,913</td>
</tr>
<tr>
<td>Forestry</td>
<td>7,154</td>
</tr>
<tr>
<td>Human resources</td>
<td>4,064</td>
</tr>
<tr>
<td>Consulting</td>
<td>5,568</td>
</tr>
<tr>
<td>Electrical maintenance</td>
<td>4,979</td>
</tr>
<tr>
<td>Urban passenger transport</td>
<td>3,746</td>
</tr>
<tr>
<td>Office workers</td>
<td>2,947</td>
</tr>
<tr>
<td>Sugar industry</td>
<td>2,375</td>
</tr>
<tr>
<td>Farming equipment</td>
<td>3,158</td>
</tr>
<tr>
<td>Graphic arts</td>
<td>3,002</td>
</tr>
</tbody>
</table>
One of the most significant points mentioned when CONOCER was created was the huge variety of public institutions that offer vocational training in Mexico, through either the Labour Secretariat or the Education Secretariat. In 1993 these institutions had 465,000 students in technological secondary education, 93,000 in training for employment, and 210,000 in technical secondary education.48

Following a period of review and a reduction in activity, CONOCER is now redirecting efforts towards the effective use of competency standards in the certification and development of human resources.

Some indicators from the results achieved by CONOCER in the initial stage show rapid growth in terms of products for standardization. The first eight standardization committees were formed in 1996. A further 75 standardization committees, equal to the number of occupational sectors, were formed up to October 2003. The work of the committees led to the drafting of the 601 Technical Standards for Labour Competencies (NTCL) and 32 competency certifying bodies, as well as the setting up of 1,273 assessment centres.

By August 2003 CONOCER had facilitated the drafting of 607 NTCL. Approximately 308 NTCL (51%) of these had accredited certifying bodies, which had, in turn, accredited their assessment centres in 256 NTCL.

The competency certificates issued covered 170 qualifications and included 177,396 certified labour competency units. One point of interest is that 80% of the certified competency units came from only 22 of the 170 available qualifications.

During a large part of the first stage, the huge efforts put into drawing up the NTCL may have led to an oversupply that did not match the requirements

48. The most significant are: General Directorate of Training Centres DGCC; National College for Professional Training (CONALEP); General Directorate of Industrial Technical Education (DEGETI); Technical and Industrial Teaching Centre (CETI); Marine Science and Technology Education Unit (UECyTM); General Directorate of Agro-fisheries Technological Education (DEGETA); General Directorate of Technological Institutes (DGIT); National Polytechnic Institute (IPN).
of the business sector or the workers. As a result there were few incentives to encourage the permanence of certifying centres, and the price regime for both certificates and for royalties to use the standards were unsustainable.

In this new stage, CONOCER was established as an organization made up of workers, business people, educators, trainers, and the federal government, who encouraged the certification of labour competencies and the ongoing development of workers through the evaluation and certification of their knowledge, abilities, and skills. The quality standards required to perform a job and to direct education and training towards the needs of the production and labour markets were taken as the base (Box 9 and www.stps.gob.mx/03_sub_capacita/01_dge/competente.htm).

<table>
<thead>
<tr>
<th>Box 9. CONOCER: Standardization Committees</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Standardization Committees are made up of workers, business people, and educators who really understand how a job is done and what characteristics are needed by workers to successfully complete a job.</td>
</tr>
<tr>
<td>The Standardization Committees create and update the Technical Standards for Labour Competencies, as well as promoting the distribution, use, and application of the NTCL throughout the country.</td>
</tr>
<tr>
<td>Source: CONOCER.</td>
</tr>
</tbody>
</table>

The work carried out at this stage is definitely closer to businesses and sectors with a clearly defined demand to improve qualifications, and therefore where the certification of competencies is required from the start by both the company and the workers.

5.3 Training institutions and the competencies approach

It is not possible to quote all of the experiences developed in the training institutions in the region in this volume. Therefore we have selected a few of the more representative examples of the use of the competency model in Latin America and the Caribbean. The occupational sectors included to
show the adoption of the competency model are considered for their depth and coverage in the different phases, which include the identification of competencies, standardization, training and certification.

SENAI, Brazil

The National Industrial Training Service (SENAI) has developed a competency-based vocational training model and offers labour competency certification services through the SENAI System for the Certification of Persons.

This is a process of institutional learning. SENAI based its model on the strategy of pilot applications carried out early in this millennium. The model is now expanding to all the states and has a central group trained in the different methodologies forming the stages of the process (these can be found on: www.dn.senai.br/br/Publicacoes).

The SENAI competency model has been designed in four stages:

• **Sectoral Technical Committee**: To contribute to the identification and continuous updating of the vocational competencies of the workers. It is formed of specialists and workers, and employers’ representatives in the occupational areas covered.

• **Preparation of Vocational Profile**: the description of what, ideally, a professional should know how to do in the area of work corresponding to a particular vocational qualification.

• **Preparation of Competency-based Curriculum Design**: Coding of information from the employment world to be understood in the world of education, translating vocational profile competencies into pedagogical terms.

• **Assessment and Certification of Competencies**: this permits recognition of the competencies acquired as a result of job experience and therefore facilitates access to training for those areas of performance in which the worker does not have the required competencies (*Box 10*).
When designing the certification system, SENAI considers the active participation of businesses, including the promotion of human resource policies to encourage the recognition of competencies for career development. The system is seen as open and inclusive. It uses the vocational profiles defined in collaboration with representatives of business and workers on the Sectoral Technical Committee.

SENA’s experience is an example of the high educational value obtained from assessing competency for certification. SENAI proposed that the assessment applied during an educational process should be different from the assessments used in identifying competencies. As a result, they have produced a comprehensive guide to the preparation of assessment instruments. The guide recommends the creation of a commission to develop the assessment instruments. The commission should be made up of an assessment specialist and a person with specialist knowledge of the work to be assessed. Another commission is set up to apply the instruments developed for the assessment. This commission is made up of SENAI teachers who have not been involved in the training of the candidates, where applicable, and an external specialist.

This experience demonstrates that strategies that involve business are essential. Establishing competency profiles indiscriminately is not necessary. Training is assessed to determine to what extent it meets the needs of business in providing and developing human resources.

**SENA, Colombia**

The National Training Service (SENA) designed its training programmes using competency-based models. It also heads the National Service of Training
The development of systems of competency-based training and certification in Latin America: a general review

for Employment, which aims to adapt national education to meet the true requirements of employment. Decree 249 of 2004 gave SENA the task of constructing this system to ensure the competitiveness, regularization, and promotion of vocational, technological, and technical training.49

This led to the System of Training for Employment, which links together a set of training bodies. Their purpose is to provide responses to the Colombian employment world in terms of training for workers, through the identification and definition of national standards of labour competencies.

The main objective is to coordinate the suppliers of technical and technological education and vocational training in the country, and to modernize and improve their programmes according to the needs and requirements of the production sector. This will guarantee increased coverage, relevance, flexibility, and quality services contributing to national competitiveness.

SENA has various subsystems that form the System of Training for Employment:

1. **Standardization of labour competencies**: This covers the processes agreed with the production and education sectors and the government to define the Colombian standards for labour competency. The Colombian Government has appointed SENA as the labour competency standardizing body.50

2. **Assessment and certification**: This process aims to promote the quality of performance, by defining the priorities for improving human resources, using assessment and certification networks. The purpose of the assessment and certification of labour competencies is two-fold. On the one hand it serves to corroborate the labour competency and on the other it recognizes the quality of the performance.

---

49. The text of the Decree is available on: www.dnp.gov.co/archivos/documentos/PRAP_PPS_Normatividad/Decreto249_SENA.pdf

50. The SENA Competency Standards are available on: http://observatorio.sena.edu.co/SNFT/snft.html
3. **Competency training:** SENA defines this as the “... comprehensive, theoretical and/or practical education process, designed to develop technical and technological knowledge, and social attitudes and values to permit the individual to act in a critical and creative manner at work. Work refers to the production activity in the labour sphere and to the construction of the social and personal dimension.” SENA ascribes the existence of the System of Training in Labour Competencies to the need to bring production and education closer together, to restructure the educational programme, to harmonize the roles of the state, and to incorporate labour competencies in the different processes as a combination of what the individual is, knows, and does, in addition to the need for a comprehensive overview of the personal, social, and productive dimension.

As a basis for the training, SENA has produced a manual of curriculum design for the development of competencies in order to offer the areas responsible for the Integral Vocational Training of SENA, a set of procedures and activities required to design curricular structures and training modules based on labour competencies. 51

4. **Certification of labour competency:** This is the recognition by an accredited certifying body that a worker meets the requirements established in a Colombian labour competency standard, thereby demonstrating the capacity to perform different labour functions and in different contexts. The certification system is voluntary, freely available, and awarded by an officially recognized body. The certification does not consider how and where the competency was obtained but is based on compliance with a Colombian labour competency standard.

SENA’s activities in this area have enabled closer work with private training programmes in Colombia. Two main areas of action aimed at conforming to a national system have been identified. The first encourages coordination between secondary education and vocational training. This

---

51 The manual is available on:  
enables secondary-level students to acquire certified competencies, thus improving their job opportunities on completion of secondary education. The second relies on cooperation with other institutions that offer training courses to ensure that the training complies with the competency standards and curriculum designs of SENA.

The move towards a national system of training for employment proposed by SENA is represented in two lines of action currently being developed. The first is to strengthen the national network of training bodies, and the second is to create links between vocational training and formal education.

The network of training institutions is being established on the basis of a number of central ideas contained in the draft of the new ILO recommendation concerning human resources development (Recommendation 195, 2004), which is widely publicized by SENA. These include:

- Education and training are a right for everyone and, in collaboration with the social actors, efforts should be made to ensure that everyone has access to education and lifelong learning.
- To establish and maintain a coordinated training and education system.
- To ensure the relevance and maintain a consistent quality of education and training programmes prior to employment.
- To guarantee the development and consolidation of vocational education and training systems to ensure that they offer opportunities adapted to the development and certification of the qualifications required in the labour market.

In 2006, SENA had a total of 1,238 labour competency standards, developed by 31 ‘sectoral tables’. The competency profiles for these standards were prepared by representatives of business and workers. A total of 174 curricular structures have been developed on the basis of these competency standards. Institutional support for the formation of a network is based on the idea of sharing and publicizing the training programmes and
standards free of charge. It should also contribute to improving the quality of training for employment programmes.

SENA provides the entities voluntarily joining the network with the 1,238 competency standards and all the curricular structures. It also offers advice in the preparation of training programmes, in teacher training services, and in the design of competency-based training.

The creation and management of a network of public and private training institutions has led to a transfer of knowledge from the National Training Institute – thus confirming its position as leader – towards the training system itself, helping to raise the level of quality of the programmes.

Moreover, the Colombian competency standards are viewed as a public asset. As no charge is made for the rights of use, they are accessible to individuals and institutions. This model is therefore contrasted with the English model or the CONOCER model, where the standardization system charges the assessment and certification centres for the use of the standard. In this case, SENA has applied the policy of free training to competency certification and to coordination with a National System.

**INTECAP, Guatemala**

The Technical Institute for Training and Productivity (INTECAP) in Guatemala has included the labour competency approach in its institutional management. This has led to the ‘Norte’ model, Technical Standardization of Competencies (*Box 11*).

<table>
<thead>
<tr>
<th>Box 11.</th>
<th>Definition of labour competence in INTECAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>The set of attitudes, skills, abilities, and knowledge required to satisfactorily perform certain production functions in a labour context. The capacities and functions are defined by the production sector and should be measured by the labour performance of the worker.</td>
<td></td>
</tr>
</tbody>
</table>
The model is applied to the design of the plans and didactic material, the evaluation and certification of competencies, and the advisory processes in human resources management.

INTECAP has been developing the labour competency assessment, certification, and training model in this way since 1998. It is principally based on technical standards that demonstrate the quality requirements of the human resources for a production function in order to meet the current training needs of the country’s production sector. Experiences from Mexico, Colombia, Brazil, and Venezuela, as well as some European countries, such as Italy and England, have been gathered together to obtain a general framework for the methodology from different points of view and areas of application (Box 12).

**Box 12. Types of competencies recognized by INTECAP**

INTECAP recognizes three types of competencies:

**Basic**: Competencies with an educational bias required by the individual to carry out any productive activity. These include the ability to read, interpret texts, apply numeric systems, know how to express oneself, and know how to listen.

**Generic**: Knowledge and abilities associated with the development of different occupational areas. For example, the analysis and evaluation of information, working in a team, contribution to maintaining health and safety in the workplace, planning actions. These competencies can be acquired through educational and training programmes and in the workplace.

**Specific**: These competencies are associated with knowledge and abilities of a technical nature required to perform a productive function. They tend to use a specific language and particular tools and instruments – for example, welding with oxy-acetylene equipment, preparing the hot rolling mill, or assessing the candidate’s performance. They are acquired and developed through training at the workplace or through self-teaching processes.

INTECAP also develops its own methodological adaptation for the construction of competency profiles, based on the functional analysis method.
The model called NORTE (Technical Competency Standard) has five components:

1. standardization;
2. design of vocational training;
3. assessment;
4. development of training events;
5. certification.

In 2002, INTECAP increased its participation in the development of the competency approach. This led to a number of publications which dealt with:

- basic and general competencies;
- human resources management by labour competencies;
- cases of human resources management by labour competency.

The publications focus on the development and application of the competency approach, while also including human resources management as the result of a joint project between INTECAP and businesses.

Until now INTECAP has mainly focused on the competency training model. It has yet to include the certification model or the recognition of previously acquired competencies in its activities.

The INTECAP experience represents a model of institutional modernization from the convergence of two processes: the incorporation of the labour competency model and the quality management model. The latter enables the institution to effectively update its structure and functions; this is complemented by the new labour competency programme.

5.4 General comments

The consolidation of competency-based training

The labour competency approach has spread across Latin America and the Caribbean region. Nevertheless, its application has mainly filtered into
the initial stages of the process for the preparation of vocational training. Methodologies for including occupational descriptions were certainly revolutionized with the advent of labour competency, as were the bases for designing the training curriculum.

New insights into the characteristics of performance and the how-to knowledge, abilities and understanding have influenced the results of the work. This opened the door for the renewal of the programmes in all the institutions that integrated the labour competency approach and, in fact, implied a broad movement to develop teacher training in the region.

Methodological and pedagogical debates on the true revolution implied by this approach can still be heard. Many believe it is simply an adaptation of old learning processes. Others only see old ideas re-dressed in new terms, thus repeating what was written in the famous taxonomy by Bloom (1956). Nevertheless, the renovating capacity of the approach may stem from its huge potential for the collective construction of knowledge.

The teams who took on the challenge of re-writing the occupational profiles or drawing up the new standards of competency saw how the participation of employers and workers gave a more realistic tone to the former method of preparation of curricula as a writing exercise. The new approach, which is more participatory and certainly more significant, has even allowed greater legitimization of training programmes and the appeasement of criticism from employers of the training response provided by institutions.

This consolidation has not yet finished and the debates and insights come from different points of view. However, the truth is that almost all vocational training teachers are aware of the model and the performance concept. In addition, changes to the configuration of work and the impact of the use of new technologies have made a concept of work based on results rather than on tasks and operations more and more necessary.
Certification: an open horizon

However, although there have been many advances in competency-based training, the recognition and certification of previous learning continues to be a grey area.

Not many countries have advanced in competency certification processes. After the pioneer experiences of INA in Costa Rica and SENA in Colombia, new experiences have been recorded in Argentina, Brazil, and Chile, but their sustainability and prevalence have still to be secured.

Based on experiences from the Ministry of Labour, an excellent theoretical and practical formula was developed in Argentina. Only time will show its capacity to spread to new sectors and cover more employees. Similarly in Chile, after the achievements with ‘Chilecalifica’ and the enactment of a law creating the National Certification System,\(^{52}\) it will be interesting to witness the evolution and behaviour of this new certification ‘market’. Support for an institutional structure in which training and certification are separated continues to be debated. It is defined according to the institutional model selected by each country. This decision is influenced by factors closely related to the institutional evolution, the educational structure, the dynamics of the National Training Institute, and in particular the interests of the social actors, businesses, workers, and the government.

There is a great contrast between the tariff system originally designed by CONOCER, which required payment of royalties by the certification and assessment centres for the right to use the certification and assessment standards, and who, in turn, passed on the costs incurred in evaluation and assessment to the users, and other systems, such as that of Chile. Here a third-party model, separating training and certification, has been proposed, and is supported with a clear, strong programme of public finance well-established in the country. These include the ‘tax allowance’ and the Colombian system, which preserves the central role of the national training system where

\(^{52}\) Law No 20267 created the National System for Certification of Labour Competencies on 25 June 2008.
financing is based on payslip deductions made by firms. In addition it is free and is therefore more easily accessible to more vulnerable groups.

**Pedagogical strategies: the true change**

The most drastic change, and the one that has most affected vocational training in recent years, started in the debate and application of the competency model but reached the classroom and workshop. These are the so-called pedagogical practices, the way in which knowledge is transferred to the participant.

Numerous new mechanisms are being tested, from the reappearance of training projects and problem-solving to the more recent massive invasion of new information and communication technologies in pedagogical areas.

It is clear that the classroom or the workshop are no longer the only places for learning and that people learn in different places and at different rates. Different competencies are developed, and the teamwork that is preached at work is also used as teamwork when learning.

In some institutions, such as SENAC in Brazil, work has been carried out in competencies in familiar areas such as the commercial teaching firms once used on a large scale in the region. SENAC has kept this resource close to the idea of “learning by doing” and has been updating it with new methodological and didactic approaches. Participants on SENAC courses work in a simulated business environment in which they develop competencies that they would not even be aware of in the classroom. Problem-solving, team-work, interpretation of information, and decision-making are some of the key competencies where the use of a pedagogical space that interacts with work has proved to be highly effective.

Other training institutions, such as SENA in Colombia, are developing the concept of ‘virtual learning environments’. Combined with communication technologies, access is provided to a repertoire of resources via the Internet or mobile phone, including course content, exercises, and process simulators.
Until now, we have viewed training institutions as large national institutions, requiring personal attendance, and where teaching could only be given in the classroom or workshop. More recently, it has been possible to access training programmes from anywhere via the Internet, and thus we have seen how students in one country have begun to follow courses offered in another country. SENA has announced that it plans to open a series of ‘branches’, initially in cities overseas, such as in Valencia in Spain. This implies that nationals will have access to services that arrive ‘virtually’, such as tests to access a competency certificate and the respective preparatory content for assessment. How will these services work? How will the thousands of emigrants living and working away from home access these services? What new regulations can be applied to this transnational training? The answer lies largely with ICT and the Internet. The rest remains to be seen.

---

53. This was the case with the course on anti-seismic construction offered by the SENA and attended by students from Peru and Guatemala, among others.
BIBLIOGRAPHY


Bibliography


CEPAL. 2008. *Los mercados de trabajo, la protección de los trabajadores y el aprendizaje de por vida en una economía global: experiencias y perspectivas de América Latina y el Caribe*. Santiago de Chile: UN Economic Commission for Latin America.


CEPAL-UNESCO. 2006. *Mejoramiento de la formación técnica, redes de articulación: guía de apoyo para la formulación de proyectos de articulación de la formación técnica y del plan de articulación de la red*. Santiago de Chile: UN Economic Commission for Latin America-ChileCalifica.

CETP. 2002. Available at: www.utu.edu.uy/webnew/modulos/utu/Areas%20de%20Cursos/Cursos%20y%20Programas/EMP%20GRAL/Expediente%204%203853%2001%2026/Reforma%20EMP%200204.doc


188


www.iyfnet.org


Finnegan, F. 2006b. Reseña de políticas educativas de articulación de la educación media con la formación para el trabajo en América Latina. Los casos de Colombia, Uruguay, México, Brasil y Chile. Informe final. Buenos Aires: redEtis-IIEP-UNESCO.

FOSIS. 2002. Evaluación programa de empleo modalidad creación de autoempleo. Santiago de Chile: FOSIS.


Jacinto, C.; Solla, A. 2005. “Tendencias en la inserción laboral de jóvenes: los desafíos para las organizaciones de la sociedad civil”. In: La inclusión laboral de los jóvenes: entre la desesperanza y la construcción colectiva (pp. 123–139). Montevideo: Cinterfor-ILO.


OREALC. 2003. Alcanzando las metas educativas. Santiago de Chile: UNESCO.


Ruetalo, J.; Lasida, J.; Berruti, E. 1998. “Formación para el trabajo de jóvenes de sectores de pobreza en América Latina. ¿Qué desafíos y qué estrategias?” In: C. Jacinto, M.A. Gallart (Eds.), Por una segunda oportunidad. La formación para el trabajo de jóvenes vulnerables (pp. 7–32). Montevideo: Cinterfor-RET.


Bibliography

Sunkel, G. 2006. Las tecnologías de la información y la comunicación (TIC) en la educación en Améric... Chil... UN Economic Commission for Latin America.

Tapia, G. 2005. “Formulación de políticas y capacidades de gestión local de programas de educación básica y alfabetización para jóvenes y adultos, en el marco de la ‘federalización’ del INEA”. In: C. Jacinto, C. Girardo, M. de Ibarrola, P. Mochi (Eds.), Estrategias educativas y formativas para la inserción social y productiva (pp. 163–194). Montevideo: Cinterfor-ILO.


Weller, J. 2003. La problemática inserción laboral de los y las jóvenes. Serie Macroeconomía del desarrollo No. 28, Santiago de Chile: CEPAL.


OTHER TITLES IN THE SERIES
‘POLICIES AND STRATEGIES FOR SECONDARY EDUCATION’

Políticas y estrategias para el mejoramiento de las oportunidades
de los jóvenes – Estudio en la Ciudad de Buenos Aires
Claudia Jacinto; Ada Freytes Frey

Financing secondary Education in developing countries – Strategies
for sustainable growth
Keith M. Lewin; Françoise Caillods

Twenty years of secondary education in Chile (published in Spanish)
M. Leonor Cariola H.; Cristián Belleï; Ivan Nuñez Prieto

Trends in secondary education in industrialized countries.
Are they relevant for African countries?
Ole Briseid; Françoise Caillods

Distance education at secondary level in India: the National Open School
K. Sujatha

Positioning secondary-school education in developing countries: expansion
and curriculum
Donald B. Holsinger; Richard N. Cowell

Science education and development: planning and policy issues
at secondary level
Françoise Caillods; Gabriele Göttelmann-Duret; Keith M. Lewin

Expansión de la educación secundaria en México: Logros y dificultades
en eficiencia, calidad y equidad
Eduardo Weiss; Rafael Quiroz; Annette Santos del Real

International Institute for Educational Planning  www.iiep.unesco.org
Other titles in the series 'Policies and strategies for secondary education'

Programas de becas estudiantiles: experiencias latinoamericanas  
(web only)  
Ana María de Andraca

Private secondary schools in Thailand (web only)  
Kannikar Pinyakong; Prapin Virasilp; Usa Somboon

Bolsa Escola: historia y evolución (web only)  
Elimer Pinheiro do Nascimiento; Marcelo Aguiar

Articular educación y trabajo: experiencias en la Ciudad de Antofagasta  
(web only)  
Leandro Sepúlveda; Pedro Milos
IIEP publications and documents

More than 1,200 titles on all aspects of educational planning have been published by the International Institute for Educational Planning. A comprehensive catalogue is available in the following subject categories:

*Educational planning and global issues*
  - General studies – global/developmental issues

*Administration and management of education*

*Economics of education*
  - Costs and financing – employment – international cooperation

*Quality of education*
  - Evaluation – innovation – supervision

*Different levels of formal education*
  - Primary to higher education

*Alternative strategies for education*
  - Lifelong education – non-formal education – disadvantaged groups – gender education

Copies of the Catalogue may be obtained on request from:
IIEP, Communication and Publications Unit
info@iiep.unesco.org

Titles of new publications and abstracts may be consulted at the following website:
www.iiep.unesco.org
The International Institute for Educational Planning

The International Institute for Educational Planning (IIEP) is an international centre for advanced training and research in the field of educational planning. It was established by UNESCO in 1963 and is financed by UNESCO and by voluntary contributions from Member States. In recent years the following Member States have provided voluntary contributions to the Institute: Australia, Denmark, India, Ireland, Netherlands, Norway, Spain, Sweden and Switzerland.

The Institute’s aim is to contribute to the development of education throughout the world, by expanding both knowledge and the supply of competent professionals in the field of educational planning. In this endeavour the Institute cooperates with training and research organizations in Member States. The IIEP Governing Board, which approves the Institute’s programme and budget, consists of a maximum of eight elected members and four members designated by the United Nations Organization and certain of its specialized agencies and institutes.

Chairperson:
Raymond E. Wanner (USA)
Senior Adviser on UNESCO issues, United Nations Foundation, Washington DC, USA.

Designated Members:
Christine Evans-Klock
Director, ILO Skills and Employability Department, Geneva, Switzerland.

Carlos Lopes
Assistant Secretary-General and Executive Director, United Nations Institute for Training and Research (UNITAR), United Nations, New York, USA.

Jamil Salmi
Education Sector Manager, the World Bank Institute, Washington DC, USA.

Guillermo Sunkel
Social Affairs Officer, Social Development Division (ECLAC), Santiago, Chile.

Elected Members:
Aziza Bennani (Morocco)
Ambassador and Permanent Delegate of Morocco to UNESCO.

Nina Yefimovna Boreskaya (Russia)
Chief Researcher and Project Head, Institute of Far Eastern Studies, Moscow.

Birger Fredriksen (Norway)
Consultant on Education Development for the World Bank.

Ricardo Henriques (Brazil)
Special Adviser of the President, National Economic and Social Development Bank.

Takyiwaa Manuh (Ghana)
Professor, Former Director of the Institute of African Studies, University of Ghana.

Jean-Jacques Paul (France)
Professor of Economics of Education, Department of Economics and Business Administration, University of Bourgogne, Dijon.

Xinsheng Zhang (China)
Vice-Minister of Education, China.

Inquiries about the Institute should be addressed to:
The Office of the Director, International Institute for Educational Planning,
7-9 rue Eugène Delacroix, 75116 Paris, France
This book examines recent transformations with regards to the links between academic secondary education (ASE), technical and vocational education and training (TVET), and job preparation skills, in the Latin America region. It analyses changes in approaches, obstacles and advances, and major challenges, and reviews some promising strategies.

Among the key questions discussed here are: How can the links between general education and TVET be improved, while taking into account the needs of local populations, social cohesion, and the demands of the labour market? And how can national education and training systems be implemented that enable effective linkage of the different resources available to promote both equity and competitiveness? The authors assert that a major challenge will be to design strategies to create bridges linking formal, non-formal, and informal education into a lifelong learning system.

The editor

Claudia Jacinto is an Argentinian sociologist and researcher and the Coordinator for the (IIEP–UNESCO) RedEtis Network on education, work, and social inclusion in Latin America. Her main areas of expertise are youth employment policies, secondary education and preparation for the world of work, and technical and vocational training. She also serves as coordinator of the PREJET Programme (on youth, education, and work) at the Instituto de Desarrolo Economico y Social (IDES), Buenos Aires. She received her doctorate in Sociology (with a concentration in Latin America) from the Université Sorbonne Nouvelle Paris 3, France.