Higher Education in Chile: Aiming for Quality

Division of Higher Education
Ministry of Education, Chile

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Organizational Structure

Higher Education in Chile[1] is a diversified system that offers three types of institutions to secondary education graduates: universities, professional learning institutes and technical training centers. They are recognized by the state under Article 29 of the Constitutional Organic Law of Education No. 18.962 (usually referred to as LOCE) enacted in 1990.

Universities provide the highest degree of learning, combining teaching, research and outreach activities. Universities teach licentiate degree programs, award academic degrees, and they are the only institutions authorized to grant professional degrees for the seventeen university programs listed in the LOCE for which a licentiate degree is a prerequisite.

Professional learning institutes are in charge of granting professional degrees other than those awarded by universities, and they are also authorized to grant higher education technical degrees in areas in which this is required.

Technical training centers are intended to train higher level technicians equipped with the competencies and skills needed to respond to the needs of industry in the public and private sector involving goods and services.

Higher education establishments (see Table 1) can be divided into traditional institutions (those that existed prior to 1980) and derive from the *Universidad de Chile, Universidad de Santiago de Chile* and *Pontificia Universidad Católica de Chile* (created as of 1980) —all with partial funding from the state (approximately 30 percent) and non-traditional, private universities (established as of 1980, with no state financial support).

Traditional establishments consist of 25 fully autonomous universities coordinated by the Council of Chancellors of Chilean Universities (CRUCH). They employ a single

[1] http://www.mineduc.cl/

admission process: the University Selection Test (PSU). This group of universities includes the 16 state universities created by law and 9 universities with independent legal status, 6 of which obtained official recognition by means of special laws, while the three remaining ones derive from the *Pontificia Universidad Católica de Chile*.

The three traditional and oldest institutions are the *Universidad de Chile,* founded in 1842, the *Pontificia Universidad Católica de Chile,* founded in 1888, and the *Universidad de Concepción,* founded in 1919.

The higher education system is currently formed by 229 institutions: 64 universities (38 licensed, autonomous universities), 48 professional learning institutes (11 of which are autonomous) and 117 technical training centers (6 of which are autonomous) . Overall, the higher education system, based on enrollment rates for 2004 (see Table 2), served a population of 594.247 undergraduate students and 15.181 graduate students (1.978 Ph.D. students at CRUCH universities).

Total undergraduate enrollment can be broken down as follows:

Traditional universities:	246.286
Private universities:	177.271
Professional learning institutes	101,674 (2003)
Technical training centers:	63.932

Together with the above, there is official recognition for higher education establishments run by the Armed Forced which are linked to the state through the Ministry of Defense.

This institutional diversity is part of the reality of higher education in Chile and it is therefore dealt with through different mechanisms and tools.

Legal Framework

Among other things, the LOCE includes the regulations for the official acknowledgement of higher education establishments. It states that the latter are authorized to grant technical degrees, professional degrees and academic degrees (licentiate, masters degrees and doctorates) as applicable.

Higher Education Reform

Globalization and inter-dependency have been made possible thanks to the huge scientific and technological changes that took place in the past decades. Therefore, future progress in the countries will be increasingly determined by the development of skills to manage, spread, use and create knowledge. This task is performed by higher education institutions through their two main functions:

- Training higher level technicians: graduates, professionals and postgraduates.
- Contributing to Chile's scientific and technological development.

Specifically, this means that Chile has to implement a higher education reform to enable it to:

- Educate increasing segments of the population in different stages of life.
- Increase full-time teaching staff with doctorates at universities prepared to conduct research and high level postgraduate studies.
- Perform deep changes in undergraduate teaching to bring it into line with the renovation in postsecondary education throughout the world, which involves abandoning rigid curricula for study programs in favor of a more open and flexible training, centered on students and due consideration for the users.
- Deliver general and transversal competencies which are essential for 21st. century professionals, such as the ability to manage information, familiarity with information technology, and communications and mastery of English as a foreign language.

- Agree upon a transferable and cumulative credit system based on a real work load for students, to replace the current credit system based on class-room presence.

Extending Coverage

In 1990 220,000 young people were enrolled in higher education and in 2003, more than half a million youths are enrolled in undergraduate programs in universities, professional learning institutes and technical training centers, showing an increasing trend in access to postgraduate studies.

In 2003, one out of every three youths in the 18 to 24 age group were enrolled in higher education, technical training or university education center. Coverage for this age group amounts to 37.5 percent (see Table 3).

Based on population projections prepared by international organizations, by 2012 Chile will have a population of around 17.4 million people, 2 million of which will be aged between 18 to 24 years old. According to such projections, the country can expect to have at least one million students in higher education by the year 2012. This involves a coverage close to 50 percent of the 18 to 24 age group, increasing requirements in terms of resources and a considerable challenge regarding quality assurance for this supply in order to actively participate in learning societies and economies.

Equity in Access: Correcting Inequality

Coverage for young people from lower income sectors has risen from 4 percent to 15 percent in a period of 13 years (see Table 4). Thirteen years ago, coverage reached 40 percent among higher income sectors while it now amounts to 70 percent and more. In the upper quintile, coverage has gone from 5 to 7 for every 10 youngsters.

Young people enrolled in higher education usually belong to families from middle to low income, and this trend will increase in the coming years. The country will have to

make greater financial efforts to meet its commitment to guarantee all gifted young people with the right to have access to higher education.

The inequalities that currently characterize Chilean society must be dealt with through different support tools which —at the same time— need to form a consistent and equitable system of student grants that will effectively serve to help the ones that need them the most.

The National Student Funding System —currently being developed— shall consist of three subsystems that will operate in coordination. Its purpose is to guarantee, through loans and scholarships, the financial support needed to fund, either fully or in part, the fees that young people need and —for the needier sectors— to also deliver help to cover their basic expenses. The system consists of:

- The National Scholarship Fund for the needier students
- The subsystem of Solidary Credit for Students enrolled in Universities that are part of the Council of Chancellors (CRUCH).
- Bursaries for students in both autonomous and accredited institutions (universities, professional learning institutes and technical training centers).

Scholarships covering fees and tuition for the needier students and solidary credits for students enrolled at universities that belong to the CRUCH are the bases of the current system of student aid operating in Chile. The new integrated method and instruments described above will make it possible to deliver aid to students at all levels of higher education in addition to improving the amount and coverage of the aid granted.

Renewal of Study Programs

The university system has significant deficiencies in terms of the organization of studies. Using the same approach as the European countries when higher education became a massive phenomenon, faced with increasing enrollment, Chilean universities reacted by

increasing vacancies in the early years and included hard to pass courses as a way to filter the number of students who go on to further studies that have a limited number of vacancies. Another option has been to extend study programs so that licentiate degrees or others planned to take four or five years, now last six or seven years (see Table 5). Drop-outs in the first years must be added to the above so that graduation rates are particularly low (see Table 6). A preliminary study shows that only 50 percent of young people who enter higher education manage to graduate in the appropriate time. It is essential to make profound changes to undergraduate teaching, to bring it more into line with the renewal that postsecondary training is experiencing the world over.

Chilean higher education cannot subtract itself from the process that is taking place in Europe, North America and other developed countries and it is therefore necessary to prepare a common response, as a national system, defining how Chile will participate in the global concert.

In order to advance to a knowledge-based economy Chile needs to have advanced human capital in sufficient amounts and it must have people capable of carrying out competitive research and innovation on a world scale. This calls for scholars, scientists, and engineers in adequate amounts to properly handle information, generate profitable flows of knowledge who are capable of moving effectively throughout the world. It is therefore essential to synchronize Chilean educational supply with that of its trade partners which calls for making study programs flexible to ensure appropriate employability and guarantee lifelong education, centering training on students and their learning, achieving curricular programs designed on the basis of competencies which take the end users into account. Effective mechanisms for student and professional mobility also need to be found.

The Chilean university system and the Chilean government have recognized early on the progress achieved by America, Australia and Europe through the Bologna Process, and they have learned with great interest of the activities and results of the Tuning Project[2].

[2] http://www.unideusto.org/tuning/

As a curricular renewal model, geared to student and professional mobility to generate a space for higher education in Europe, it will be an important point of reference for change.

In the Chilean case, a political framework such as the Bologna Process is still not available to define and guide this process. Therefore, a design from the bottom up will mainly set the bases for curricular renewal and future projections. It is believed that in this process, recent international experiences will prove essential to motivate and train national specialists, guide the methodologies to be adopted, encourage networks of collaboration and enable comparative assessments.

The MECESUP Program

The Program to Improve Quality and Equity in Higher Education (MECESUP[3]) is the policy and development instrument that the Chilean government has been using in the past five years to address the challenges created by the reform of higher education. To this end and pursuant to a partial loan from the World Bank (BIRF 4404-CH), since 1999 it has awarded a total of 369 academic development and improvement projects in higher education for an amount close to US$ 225 million. Simultaneously, it has implemented, on a trial basis, a quality assurance system based on self-regulation and accreditation for programs and institutions, the definite law for which is currently being processed by the National Congress. Moreover, it has favored the improvement of management at all levels.

The MECESUP Program will end, as an incremental development resource allocation mechanism, in 2005.

The most recent announcement of opportunities for its Competitive Fund, posted in 2004, focused on curricular renewal as the pilot strategy to initiate a broader process of synchronization and modernization of national university supply and its coordination with other levels of higher education. Through this special announcement, awards were recently made for an amount of US$ 4.5 million to 16 pilot projects in the field of design of

[3] http://www.mecesup.cl; http://www.mecesup.cl/informativo/

professional profiles and competencies in 11 disciplines (Medicine, Nursing, Pharmacy, Veterinary Medicine, Engineering, Education, Business Administration, Aquaculture, Philosophy and Art, Social Work, and Architecture), to determine generic competencies and for the analysis of a system of transferable and cumulative credits for student mobility in Chile. These activities shall be integrated, as far as possible with the Latin America Tuning Project[4] which, with the support of the European Commission Alfa Program and the Tuning Project, was launched recently to begin looking for elements of similarity and collaboration in curricular renewal in both continents.

As part of the ongoing character of the MECESUP Program, the Chilean Government is currently preparing, together with the World Bank, a second stage called MECESUP Two to ensure its continuity, targeted to academic and curricular renewal, and to explore new resource allocation instruments (based on performance agreements) to thus ensure support for the postgraduate doctorate being offered in Chile. The implementation phase is expected to begin in the second half of 2005.

General Competencies for Professionals in the 21st. Century

Certain transversal competencies shall prove essential in the 21st. century for professionals to be effective and successful in this budding world. Mastery of the English language and the skills to navigate in the realm of computers are a clear example of the competencies required. The new generations of Chilean professionals will have to master English as a second language to be able to communicate in the globalized world. Chile needs to set itself the goal —as a country— to have a significant proportion of its professionals by the 2010 Bicentennial of its Independence to be bilingual in English and Spanish.

[4] http://www.unideusto.org/tuning/tuningal/

Improving Technical and Professional Training

A mature education system includes different training levels that form an articulate and flexible network. This is not currently the case with Chilean higher education, where the ratio of professionals to technicians is reversed (6:1) to the one prevailing in developed countries and the public view of technicians is negative.

The scholarships and study loans system has favored university education over technical study courses. Access to loans by students from technical training centers and professional learning institutes will make it possible to revert this trend.

In a society where higher education is perceived as the best tool to overcome poverty and inequality, technical training centers and professional learning institutes are an essential contribution for many young people. The possibility of offering them quality education, duly accredited and facilitating the possibility of going on with their studies later on in life are the challenges currently faced by professional and technical education.

Quality Assurance

Higher education in Chile is supplied by a large variety of institutions: traditional and new, public and private, universities, professional learning institutes and technical training centers. Post-secondary education institutions have different inclinations: teaching and research, specialized in certain disciplines both in teaching as well as in research, dedicated to the regions, targeted to undergraduate and postgraduate studies, and so forth.

It is advisable to maintain and strengthen this diversity while preserving the quality of studies and the transparency of the different options, and at the same time establish a system with different levels to offer young people and adults different training opportunities throughout their lives.

In a higher education system it is essential for programs and institutions to guarantee quality so that the courses taken at various institutions can have equivalences on

a national and international level. Chile has decided to implement quality assurance in higher education through self-regulation and the accreditation of programs and institutions. The latter has been put into action in an experimental manner through the National Undergraduate Accreditation Commission (CNAP[5]) and the National Postgraduate Accreditation Commission (CONAP[5]).

Sustained quality assurance in higher education is the goal of the Quality Assurance Bill for Higher Education Institutions currently being discussed by the National Congress. This bill establishes a series of regulations whereby the state publicly guarantees the training of technicians and professionals in the country. The bill considers five functions:

- Accreditation of undergraduate study programs
- Accreditation of postgraduate study programs
- Institutional accreditation
- Licensing of new institutions
- Information system

There is consensus on the need to improve available information on the supply in higher education. The Bill on Quality Assurance establishes the obligation to deliver prompt, accurate and pertinent information.

The creation of greater abilities to gather, process, validate and publish information at the Ministry of Education and at the institutions is a work in progress that can be implemented as soon as the law is enacted. There is a plan to establish a Higher Education Observatory for this purpose.

For future students and their families it is essential to make informed decisions. This is made easier if they know their possibilities of employability and the potential

[5] http://www.cnap.cl; http://www.conicyt.cl/becas/acreditacion-conap.html

income offered by the different academic alternatives. The Employment Observatory [6] has revealed important data on the employability and income of professionals and technicians but the data is still not broken down and does not cover all specific study programs and institutions. This is a challenge that needs to be addressed for young people to be able to choose freely among the opportunities they face when they complete their secondary education.

A Big Boost for the Development of Science and Technology

The weakest link in Chile's involvement in the knowledge society is its insufficient development in terms of its scientific and technological capacity. This also applies to the production of goods and services and to innovation.

Chile requires a modern national science and technology policy that establishes priorities, guidelines and strategies consistent with the set of instruments and programs that contribute to scientific development at present.

The country has a bias toward research in basic science due mainly to the fact that funding sources are geared to financing the supply of researchers who frequently do not coincide with the national needs of production development. Raising technological development is essential to increase the value of our exports of natural products and of services in order to move forward to a knowledge-based society. Among the main purposes, the following are favored:

- Public and private investment in science and technology.
- Research teams and their links with the production sector
- Postgraduate training and its insertion in the business sector

Establishing national and international research and development networks to create a critical mass in the different areas.

[6] http://www.futurolaboral.cl/FuturoLaboral/index.html

The Chilean Government recently signed a Project for Investment in Science and Technology[7] in the amount of US$100 million the purpose of which is precisely to materialize the proposed challenges. On the other hand, the MECESUP Program has been providing significant support to the improvement and development of the doctoral programs that are being offered in Chile, aiming for a three-fold increase in enrollment and graduation by 2010, the year of Chile's Bicentennial Anniversary of its Independence.

Conclusion

The Chilean Government has made a commitment to reform higher education so as to allow the country to have at hand the advanced human capital needed to advance towards a knowledge-based economy and take advantage to the fullest of the opportunities offered by globalization. This is viewed as fundamental to achieve economic and social development.

[7] http://www.conicyt.cl/bancomundial/index.html

Table 1. Higher Education

Number of Higher Education Institutions, Country Total, by Type & Category

	Years						
Type/Category	**1990**	**1992**	**1994**	**1996**	**1998**	**2000**	**2003**
Institutions with direct state contribution	**22**	**25**	**25**	**25**	**25**	**25**	**25**
Universities	20	23	25	25	25	25	25
State	14	14	16	16	16	16	16
Privately owned, public univ.	6	9	9	9	9	9	9
Professional institutes	2	2	0	0	0	0	0
Institutions with no direct state contri	**280**	**261**	**256**	**238**	**226**	**215**	**204**
Universities	40	44	45	43	41	39	39
Professional institutes	79	74	76	69	66	60	48
Technical Training Centers	161	143	135	126	119	116	117
Total Higher Education System	**302**	**286**	**281**	**263**	**251**	**240**	**229**
Universities	60	67	70	68	66	64	64
Professional institutes	81	76	76	69	66	60	48
Technical Training Centers	161	143	135	126	119	116	117

Includes all officially acknowledged institutions

Table 2. Enrollment in 2003

Students in Higher Education by Type of Institution
(Enrollment and Percentages)

	CRUCH Universities	Private Universities	Professional Institutes	Technical Training Centers	Total
Enrollment	230,174	148,662	101,674	62,070	542,580
Share	43%	27%	19%	11%	100%
	25	39	48	117	229

Table 3. Coverage Ages 18-24

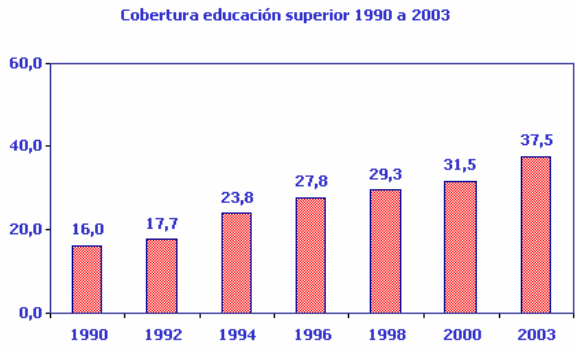

Table 4. Social Coverage

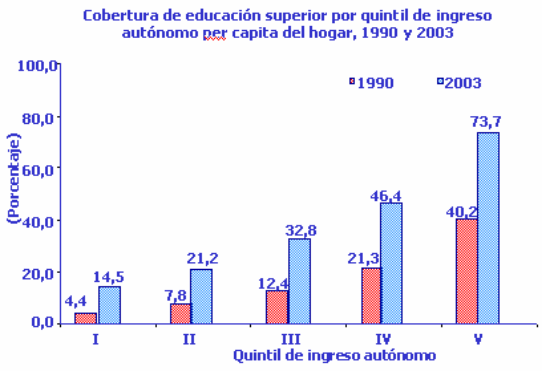

Table 6. Undergraduate Graduating 2003

Institution Type	Graduating Males	Graduating Females	Total Graduates
Council of Chancellors Univ.	13,834	13,722	27,556
Private Univ.	5,726	5,830	11,556
Professional Institutes	5,175	4,262	9,437
Technical Training Centers	4,155	5,856	10,011
Total	**28,890**	**29,670**	**58,560**

Study programs	Theoretical Length	Actual Length	Actual length over theoretical
Architecture	5.80	6.80	1.18
Law	5.00	6.90	1.39
Civil Engineering	6.00	7.80	1.31
Medicine	6.80	7.70	1.14
Elementary School	4.20	5.20	1.23
Teacher			
Agricultural science	5.00	6.90	1.38
Business admin.	5.00	6.10	1.23
Journalism	5.00	5.80	1.16
Average	**5.40**	**6.90**	**1.27**

Table 5. Time to Graduation