

ORGANIZING CURRICULUM REFORM IN SECONDARY EDUCATION : CLUES FROM LATIN AMERICA.

Discussion paper for the 2nd Regional Secondary Education in Africa Conference
Dakar, June 6-9, 2004

Cristián Cox
Ministry of Education of Chile

Introduction

Throughout the 1990s and into the present decade, Chile's educational system has undergone major changes. Coinciding with a transition to democracy process, after a prolonged authoritarian military regime, three successive governments and the country's economic and political *elites* have defined education as a strategic mean for reaching economic development and a socially more just and integrated society. In a context of economic growth, political stability and consensual policies, public expenditure in education more than tripled between 1990 and 2003, and private expenditure increased accordingly. A range of major programs for improvement of both quality and equity of education were agreed upon and implemented, including a major curriculum reform of secondary education.

In this paper, we shall briefly refer the *context, contents and process* of the secondary school curriculum reform of Chile in the 1990s

1. Political and institutional context.

The most decisive feature of the political context of the policies and reform of the 90s in Chilean education is the consensus of the political system –government and opposition-, not only on education's strategic importance for economic growth, social integration and democracy, but also on the fundamental policies that were required. For reasons connected both with a recent history of deep and prolonged political conflict and trauma (the breakdown of democracy in the early 1970s, followed by 17 years of an authoritarian military government), followed by a politically sophisticated and successful transition to democracy, and the widely shared vision that a direct requirement of modernity at the end-of the XX century is the ability to use and apply knowledge, throughout the 1990s and the beginning of the present decade there exists a context in which government and opposition agree on the fundamentals of a remarkably rich range of state-led interventions in the educational system of the country.

The democratic government, which came to power in March 1990 after 17 years of military government, inaugurated a range of educational policies to be implemented, from then until 2003 by, as said, three governments. They initiated and applied policies conceived of, elaborated and implemented, as *state* –and not only government- policies, as all the most

important changes were agreed upon and supported in Congress or in specially set national *ad-hoc* commissions, by the Opposition. The policies were guided by objectives of quality and equity in education, and resorted to a combination of state and market instruments which characterise their implementation. (Cox and Lemaitre, 1999) This meant redefining the state's role in this sector: from a *subsidiary* role, in *demand-driven* contexts, to a *pro-active* role, which implied effective state intervention for obtaining system-wide goals of quality and equity.

School system context

For any educational policy it is evidently a key component of 'context', the main structural characteristics of the schooling system which inherits and it seeks to affect. We shall outline its main features.

Chile's school system has an 8-4 structure: eight years of primary education are compulsory for pupils aged six to 13 years old. These are followed by four years of secondary education, which until 2003 were not compulsory for pupils between the ages of 14 and 17. (A reform to the Constitution, passed in May 2003, which will come into effect in 2004, will make 12 years of education mandatory). The division between general and vocational education, which organised secondary education's four years – with students starting their vocational specialisation at the age of 14 – was redefined by a curricular reform in 1998.

Chile achieved universal coverage of an 8 grades primary education level in the early 1970s and since then the expansion of enrollments in secondary education (years 9 to 12) has been a consistent trend, throughout the 1980s (when its expansion was not a governmental priority) and the 1990s (when it was).

Table 1.
Enrolments and coverage, primary and secondary education. 1970-2002

Year	Enrolments		Coverage		Average years of schooling 15 + years old population
	Primary	Secondary	Primary	Secondary	
1970	2,200,160	306,064	93.3	49.7	4.3
1982	2,116,397	565,745	95.2	65.0	7.7
1990	2,022,924	719,819	91.3	77.0	8.6
2000	2,355,594	822,946	97.0	85.0	10.2
2002	2,341,519	896,470	97.0	87.0	-----

Source: Ministerio de Educación, Compendio de Información Estadística, 1991, 2000, 2002.

As shown in Table 1, secondary education coverage increased 15 percentage points during the 1970-1982 period, 12 points in the next eight years, and 8 percentage points during the 1990s, across three decades which saw Chilean educational policies go from socialist orientations (1970-73), to a mix of authoritarian and neoliberal ones (1980s), to a new combination of state and market mechanisms in a democratic political context (1990s). It

is a major feature then, of the national case under examination, this unrelentless (and answered) social pressure for secondary education's expansion, regardless of political circumstances and their characteristic policies.

2. Secondary education curriculum reform : embedded in a larger policy context

It is important to note that secondary schooling reform policies are part of a larger whole of educational efforts of state and society during the 90s. As part of a more inclusive strategy of reform, it drew momentum and added potential for change from a larger configuration of forces.

The following Table distinguishes three domains in the educational policies of Chile in the 90s, in which the first includes the political and policy decisions which established the *conditions* for the realization of the substantive components of the secondary school reform, which are itemized in the other two ambits.

Thus, the first domain (columns 2 and 3 in Table 2) includes the political and financial decisions that define the framework in which the secondary school reform takes place, or in which it was embedded. This domain involves four key factors: a) the governmental policy vision or paradigm in this sector, b) the level of agreement or conflict about educational policy; c) the level of expenditure and distribution among levels within the sector; and d) the State's relationship with teachers (a key to sector governance).

Table 2 . Synoptic view of policies and reform measures affecting secondary education in the 1990s

Budgets in constant US\$ from the year 2001

Government	Year and budget	Conditions: Labour, financial and legal framework	Programmes for improving quality and equity of secondary schooling	Reforms: School day and Curriculum reforms
Presidency of Patricio Aylwin (1990-1994)	1990 Budget: USD 907 million	Change of educational policy paradigm: responsible, leadership role for the State; education for quality and country competitiveness; equity, affirmative action.	900 schools programme	
	1991 USD 1 035 million	Teachers' Statute (No. 1)		
	1992 Budget: USD 1176 million			
	1993 Budget: USD 1 328 million	Shared Financing. Tax incentives for donations to education.		
	1994 Budget: USD 1 461.3 million			
Presidency of Eduardo Frei (1994-2000)	1995 Budget: USD 1 620.2 million	Consensus-building: national commission for modernising education; agreement among political parties on an Educational Agenda Teachers' Statute (No. 2): more flexible; collective performance incentives (SNED)	MECE-secondary schools (1995-2000)	
	1996 Budget: USD 1 840 million		Fellowships for teachers to study abroad	
	1997 Budget: USD 2 017 billion		Montegrando project. 3 Teachers' initial training & professional dev. programs	Law for the full school day. National consultation on the new secondary education curriculum.
	1998 Budget: USD 2 214 million			New curriculum for secondary education
	1999 Budget: USD 2 412 million			
Presidency of Ricardo Lagos (2000-2006)	2000 Budget USD 2 617 million	Ministry – Teachers' union agreement: individual performance incentives Law to improve wages; teachers' network; individual performance assessment.	Focused strategy to reduce drop-out rates from secondary education (high school for all)	
	2001 Budget: USD 2 788 million			
	2002 Budget: USD 3 017 million	Voluntary system for evaluation of teachers of excellence is put in place.		
	2003	Reform to the Constitution: extension of compulsory education to 12 years		

Source: Cox, 2003.

From the perspective of the institutions and key players involved, this dimension is the most politically sensitive of the three, as well as having macro economic implications. The key components in this sphere included: a) the shift in the policy-organising paradigm away from the subsidiary and toward the proactive State; b) the national vision defining the high priority of education, the framework of agreements and the low degree of conflict that accompanied and defined policies of the period, all elements which converged into a politically plural and very influential national commission for modernising education, convened by the President of the Republic in 1994 (*Comisión Nacional de Modernización*, 1994); c) the sustained growth in spending on education, both public (from US\$ 907 million in 1990 to over US\$ 3,017 million in 2002) and private (from 1.8% to 3.3% of GDP), and expressed in the laws on shared financing and educational donations (1993); d), the laws defining the teachers' status, from 1991 and 1995, and the evaluation and individual incentives to the best teachers (2001 and 2003); and e) a reform to the Constitution which made the completion of secondary education obligatory.

Programs and Reform

The second policy sphere or domain (column 4 in Table) includes all direct interventions to improve learning quality and equity. From the perspective of its development and implementation, this sphere reveals a simpler political economy. It falls entirely within the government's educational sector. This sphere involved between 1990 and 2003 three programs of improvement of quality and equity for secondary education, resorting mainly to investments and support strategies: MECE-Secondary Education, *Montegrande* and *Liceo para Todos* ('High school for all').

Finally, a third sphere (column 5 in Table 2) includes policies directly dealing with teaching and learning quality, but unlike specific improvement programmes these are compulsory throughout the system and affect structural aspects. These are the reform components themselves: the change in the school day, *-Full Day School Reform-* which began in 1997, and the curricular changes which in secondary started in 1998 *-Curriculum Reform-*. For both components the political context and the financing were more complex than those of the Programmes for improvement, as they required laws and agreements between government and opposition, in the case of the full school day; and highly participatory processes and inter-institutional mediation (Ministry of Education and Higher Education Council) in the case of the curriculum reform.

Consensus, resources and Governance

The main ground-conditions for the secondary education reform –as itemized in Columns 2 and 3 of Table 2- are a high degree of agreement about its need and main orientation, the availability of resources, and good governance conditions in the system.

3. Curriculum reform.

The reform of the curriculum of secondary education (1998-2002) was an answer to three requirements, one legal, the other two social and educational. The legal requirement was

established by a law passed in the last day of the military regime (*Ley Orgánica Constitucional de Enseñanza*, LOCE, of March 1990) which established the decentralisation of the school curriculum, and an end to the Ministry of Education's sole control over it. For the first time since the end of the XIX century, schools could define their own programs of study, provided these complied with the national curriculum framework. This had to be elaborated by the Ministry of Education and approved by a new public body -the *Consejo Superior de Educación*-, mandated to be the final authority regarding the regulation of the school curriculum.¹ The other two requirements were the need to respond to a differentiated student body -a result of the sustained expansion of coverage-, and the general requirement of higher education, families and labour markets to up-grade and adapt the formative experience that secondary education offered to different and/or higher standards. The definition of a curricular structure which answered to these requirements was the critical knot of the new curriculum design and approval.

Overall curricular structure

The key decision regarding curricular structures of secondary education is about the boundaries (curricular, temporal, institutional, etc) which establish a differentiation between general and vocational education. A traditional form of characterising models of secondary education world-wide is in terms of this differentiation. Thus, the non-existence of this differentiation defines the model in England, USA, Australia, Canada and New Zealand; its early institutional and curricular definition and its linking to work in industry, defines the German model of dual education; a less early but also curricular and institutional differentiation of the paths leading to a highly differentiated structure of *baccalaureats* in France, define a third model of secondary education structure (Moura Castro, Carnoy, 1998; Trow, 1977). In terms of structure, Chilean secondary education was closer to the French model, and the reform operated within this historical matrix. Without altering institutional features, i.e., the existence of two types of *liceos*, general and vocational, the reform changed the structure of their curricula, narrowing the gap between the two modes of formative experience, and redefining profoundly the contents of each of the two experiences.

Structurally the difference between the two modes of secondary education was narrowed, from four to two years. The grade in which the curriculum became differentiated was postponed, from grade 9 to grade 11 (or from 14 to 16 years of age). In the first two years of secondary education (grades 9 and 10), the new curriculum structure contains a common curriculum of general education, independently of whether a student attends an academic (general) or vocational educational institution (in Chile labelled 'technical-professional')

¹ The *Consejo Superior de Educación* (Higher Council of Education), is an autonomous public institution whose functions include: the official recognition of new universities and other tertiary level institutions; approval of the official school curriculum elaborated by the Ministry of Education; and appeals instance for schools whose autonomously defined curricula had not been approved or recognized by the latter. The *Consejo* is presided by the Minister of Education and is constituted by 8 members, designated by institutions from the following domains: state universities, the scientific community, the Supreme Court and the Commanders in Chief of the Armed Forces. It is evident that the Council has a composition which is not harmonious with its functions regarding the school system's curriculum; and it is surely difficult to find comparable institutions in complex educational systems with a representation of the Armed Forces.

education). Thus, all students in the country share a common educational experience until grade 10 (prior to the reform the common curriculum ended with primary education, or grade 8).²

During the final two years of secondary education (grades 11 and 12), in both the academic and vocational strands, the curricula combine general education with specialised education. In the academic (or humanistic-scientific) mode approximately two thirds of the time is spent on general education, including 9 traditional curricular areas: language, maths, history and social sciences, philosophy and psychology, science, technology, physical education, art and religion. Conversely, in the professional-technical strand about two thirds of the time is devoted to specialised education.

Specialised education in the professional-technical strand passed to comprise 46 different specialities organised into 14 economic sectors or occupational groupings (in contrast to more than the 400 specialities available prior to the reform): *administration and commerce, metalworking, electricity, chemicals, construction, logging, mining, graphics, food technician, garment industry, social projects, hotels and tourism, farming, fisheries*. These new specialities, are now offered after completing a much more robust basis of general education than that which was available prior to the reform, and in terms of their specific contents and practices were designed to prepare students for a life of work in a particular *occupational sector* rather than for a *particular job*. The assumption being the rapid and difficult to predict changes in technologies and occupations, and the need to prepare in more ample and easier to recontextualise competences. The new curricular definitions of the mentioned specialities were formulated as ‘graduating profiles’, which specified the capacities to perform a set of tasks and functions characterising an occupational speciality, that a student had to acquire before leaving school. (Miranda, 2003)

Specialised education within the academic strand requires that part of students’ plan of study be devoted to a combination of courses (not less than two and not more than four), which schools define autonomously. Students themselves choose the combination of their preference on the basis of personal interest. The courses of the specialised mode, though belonging to the same mentioned curricular areas of general education, treat contents and objectives in greater depth and breadth, allowing for a significant measure of specialisation in the final two grades where there was almost none before the reform.

Tables 4 and 5 specify the temporal structuring of the general and differentiated sections of the curriculum of both modes of secondary education, as well as of ‘non-regulated’ time, to be allocated by each school to its own curricular definitions.

² A major direction decided in 1996, in agreement with main-stream ideas on curriculum reform at the secondary level . See OECD 1994.

Table 4: Time-frame, *Humanistic-Scientific* Secondary Education

Grade	General Formation Weekly hours	General formation Yearly hours (*)	Specialised Formation Weeklyly hours	Specialised formation Yearly hours	Non-regulated Weekly hours	Non-regulated Weekly hours
1° (year 9)	33	1,287	0	0	9	351
2° (year 10)	33	1,287	0	0	9	351
3° (year 11)	27	1,053	9	351	6	234
4° (year 12)	27	1,053	9	351	6	234

TOTAL Four years %		4,680 71%		702 11%		1,170 18%
---------------------------	--	--------------	--	------------	--	--------------

TOTAL N° of Hours. 4 years: 6,552

Note (*) The yearly total of hours correspond to 39 weeks of classes per year, with Full School Day reform implemented.

Source: *Decreto Supremo de Educación*, N° 220, (1998) and its modifications (2000 y 2001).

Table 5: Time-frame, *Technical-Professional* Secondary Education

Grade	General Formation Weekly hours	General formation Yearly hours (*)	Specialised Formation Weeklyly hours	Specialised formation Yearly hours	Non-regulated Weekly hours	Non-regulated Weekly hours
1° (year 9)	33	1,287	0	0	9	351
2° (year 10)	33	1,287	0	0	9	351
3° (year 11)	12	468	26	1,014	4	156
4° (year 12)	12	468	26	1,014	4	156

TOTAL Four years %		3,510 54%		2,028 31%		1,014 15%
---------------------------	--	--------------	--	--------------	--	--------------

TOTAL N° of Hours. 4 years: 6,552

Note (*) The yearly total of hours correspond to 39 weeks of classes per year, with Full School Day reform implemented.

Source: *Decreto Supremo de Educación*, N° 220, (1998) and its modifications (2000 y 2001).

The contents and focus of subjects

Regarding the foci of changes within the school subjects, the reform included changes in *orientation and content*, according to three criteria: i) changing from an emphasis on contents to an emphasis on skills or competencies; ii) updating and enriching subjects, or requiring higher standards of achievement in them; and iii) ensuring meaning or relevance of the curriculum in terms of pursuing connections to students' lives. Given the needs of an information and knowledge-intensive society, the skills that are emphasised by the new curriculum, include: ability for abstraction, systemic thought, experimentation and learning to learn, communication and co-operative work, problem resolution, managing uncertainty and adapting to change. The new curriculum also promotes the development of civic habits and attitudes built upon the unquestionable value of democracy and human rights. It

underlines as well the importance that students be schooled in the inherent tension between values which almost by definition pull in opposite directions: rights and obligations, solidarity and competition, loyalty and scepticism, order and criticism, openness to globalisation and identity. An education that ignores or subordinates one of the values in each set is irrelevant because abstract: it would develop students' moral sensibilities and understandings in ways that would not be relevant once they leave the school grounds. (OECD, 2004).

New university entrance examinations and their impact on the reformed curriculum's implementation

It is a constituent part of the curriculum reform of the secondary level, a change decided in 2000 in the university entrance examinations by the consortia of traditional universities of the country and the Ministry of Education. The examinations rested on a model referred to scholastic or academic 'aptitudes', adopted at the end of the decade of 1960 and closely following ETS' Scholastic Aptitude Test (SAT). The change involved shifting the entrance examinations to a curriculum-referred model, predominant in all major university entrance examinations of Europe and beyond ('A level examinations' of England, *Baccalaureate* of France, *Abitur* of Germany; *Bagrut* from Israel, etc). (Britton and Raitzen, 1996). The new instruments were to be based on the knowledge contents and abilities explicitly defined in the national curriculum framework of secondary education. The key justification for the change was to align in an explicit way a very high-stake examination with the formative experience provided by school curriculum, thus enhancing decisively the motivation of students and their teachers to work their contents and, from the universities' viewpoint, strengthening the preparation of their prospective undergraduates. (Comisión Consejo de Rectores, Ministerio de Educación, 2000).

4. Full school day reform: expansion of the time-frame of schooling

As from 1996, Chile redefined the temporal frame of its schooling system, abandoning a scheme predominant since the mid Sixties of two shifts of six pedagogical periods to a full school day, consisting of eight 45-minute pedagogical periods. The change involved an absolute improvement to students' time available for curricular subjects, as well as extra-curricular activities, as only one group of students would make use of each school's facilities. The change imported major infrastructure investments as well as organisational adjustments in schools, with important implications for both quality and equity goals of the policy.

According to a recent report of the Ministry of Education to the OECD: "The longer school day was based on quality requirements: the higher cognitive skills required by the new curriculum to meet teaching objectives take more time; the time required for exploring and analysing is greater than that occupied by lectures and dictation; developmental tests and project pedagogy assumes longer test times than multiple choice tests or responses from "closed" sources", such as summaries and fact sheets. It was also based on criteria of equity: there is an intimate link between the time factor and learning in socially vulnerable contexts. For poor groups, with different socio-linguistic codes from those of the general

school culture, this experience requires learning a whole new code, which takes them more time than students from middle and upper income groups, whose family socialisation already includes school codes”. (OECD, 2004, p. 31)

The impact in terms of longer school hours for each level of the school system is:

- 232 chronological hours per year from third to sixth grade³.
- 145 hours per year in seventh and eighth grades.
- 261 hours per year in the first two years of secondary education.
- 174 hours per year in the last two years of secondary education.

The change in the length of the school day has required a considerable investment in school infrastructure (about US\$ 883 million between 1997 and 2003), and more resources for hiring teaching hours through the subsidy. (Ministry of Education, Planning Division, 2003).

5. Curriculum Reform’s process

Agenda setting and preparation: research, participation, conflict and learning.

Policy making at the beginning of the Nineties in Chile could count on the results of a decade of educational research on primary and higher education carried out in the country by a network of research centers during the 1980s. But not so regarding secondary education, which in spite the fact of its new massive character and evident transformation of its traditional functions –not any more solely a preparatory system for higher education entrance- had not been an object of systematic research. Confronted with this fact and the urgent need to construct a sufficient analytic basis for policy design, the Government defined a research agenda and called universities and independent research centers to compete for the execution of research projects in six major areas identified as strategic:

- social demands to secondary education
- curriculum and structure of secondary education
- teaching practices
- evaluation of learning results
- economic efficiency of secondary education’s two modalities (general/vocational)
- teachers initial training

The results, obtained in an 18 months period, decisively transformed the level and specificity of the diagnosis of secondary education and its relationships with society and the labour market, on the one hand; on the other, all the key factors to be considered in a

³ 232 chronological hours amount to 309 45-minute periods and 9.3 additional weeks of classes per year.

process of change of secondary education –curriculum, pedagogy, teacher training, supervision, etc-, became substantially more well known and quantified in their basic features than before. By the beginning of 1993, the Ministry of Education had a knowledge basis robust enough for initiating the design of policy answers to the issues revealed by the described research effort. The more important in policy terms and most robust as research efforts of the referred projects were published and distributed to key actors, so that the new knowledge became a basis for discussion of alternatives beyond the government.

A nation-wide consultation process on secondary education (1992)

The Ministry of Education started its policy design efforts regarding the secondary level, organizing a consultation process with all state funded secondary schools or *liceos*. It argued that an agenda of change in education which had quality as one of its focii, required the adhesion and commitment of all actors and that in order to obtain this it was necessary a process of elaboration of a common diagnosis of the secondary education that the country had, and the one that it required for its development and social integration.

The process was defined as a ‘national conversation’ on secondary education (*‘Conversación nacional sobre educación media’*), and consisted in the discussion in practically every secondary school of the country, of a document produced by the Ministry on key themes like structure, quality and equity of secondary education. The invitation to participate was inclusive and flexible: every school would decide how to organize its discussion. The process included the elaboration by the participant groups of a report to the Ministry of Education on the topic (or topics) discussed; the Ministry’s commitment was to produce a report on the process and its results at a national level, which would be returned to every participant school.

The answer revealed a strong interest, not only of the educational community but also of civil society. The Ministry received reports from 2,043 groups (more than the total number of state-funded schools at the time, which was 1,350), from every region of the country; 12% of the participants in the groups did not belong to a school community (they were not teachers, students, nor parents, but instead, members of community organizations, university lecturers and students, unionized workers, Catholic Church community groups, members of neighborhood organizations, municipal representatives, etc). (Mineduc, 1993)

From a reform perspective, the key topic was ‘structure’,⁴ which included for discussion the options of : i) conserving a clear cut general/vocational division of four years each, and ii) , transforming the structure towards a comprehensive model, with a minor specialization in the final two years. Just above half of the groups (54.7%) coming from the humanistic-scientific schools rejected the change; 67.3% of the groups coming from technical-professional secondary schools did so. (Mineduc, 1993, table 5). As we shall refer, five years later, a proposal of curriculum reform which included this structural dimension was also subjected to a consultation process (1997): the majority of schools supported the proposed changes, but with adjustments.

⁴ Other discussed topics were: values, teachers, quality of results, youth, equity.

Conflict and learning

In terms of diagnosis and initial ideas, the curriculum reform has its roots in the research and consultation processes described. To this analytical and political genesis, the curriculum reform adds a decisive factor: a strong political reaction against an early draft of curriculum reform design, presented by the Ministry to discussion by key stake-holders - associations of private education providers, the Catholic Church, academic institutions and think tanks, the media- , in early 1992.

The proposal had been elaborated by a small team of educators within the Ministry, with no external counterparts, and put to discussion what was thought at the time by the Opposition and the Catholic Church a major and ominous innovation: a state definition of the values which the national curriculum had to communicate through its transversal strands -i.e., affecting all the disciplines. Values referred to key contemporary issues, like human rights, environmental and gender issues, and the like. To its ideological meanings, the draft added technical weaknesses which were raised to the Ministry by the newly established *Higher Council for Education*, and also voiced internally. The Ministry found itself in the quite untenable position of having to defend in a major political and media confrontation, a weak proposal with strong impact upon the consensus climate that permeated the transition in general and the Ministry's approach to reform in particular. The proposal was retrieved by then Minister and now President Ricardo Lagos and the urgency of having the curriculum of secondary education reformed, drastically redefined, -an urgency which had been set by the military government literally in the final day of its office through a Constitutional Law (LOCE of march 1990)-. The Government confirmed the hard way something it knew and which in the hectic initial two years of the transition somehow had slipped its grasp: that the curriculum was politically a most sensitive area, and that its redefinition demanded high-level technical as well as political capacities and *time*. In fact, there would be no new proposal put to the public until 5 years later. (Cox 1999 and 2004; Picazo, 2001; Gysling, 2003)

Institutions, actors and stages in the elaboration and decision-making of the new curriculum. (1992-1998).

It is only in the second semester of 1995, that the Ministry of Education starts a process of elaboration, discussion and approval of a new curriculum framework for secondary education. The main lesson of the false-start of 1992 had been that a reform in this area demanded a strong technical and political basis, and time. Time to build opinions, reach agreements and refine the proposals.

The process took almost two years (from June 1996 to May 1998) and it had many key decision-making instances, in which the key stakeholders and decision-makers varied. Figure 5 depicts the path of the whole process and its actors, institutions and participation in the successive versions of what finally became the new framework. There were three founding criteria which in Ministerial terms ordered the whole process:

- the generating ground of knowledge and vision on what was required as innovation in the curriculum had to combine forefront knowledge of the disciplines, teachers' views and definitions, and society's demands. Further, in the case of technical-professional education, it had to include as decisive, the views on the competencies required in production by firms of the different industries and services.
- there had to be processes of consultation to external actors and institutions from the three referred domains : academia, teachers, and the political and productive fields.
- the ministry itself needed a high level technical and political decision-making structure for managing the elaboration process, and then obtaining its approval by the Higher Council of Education.

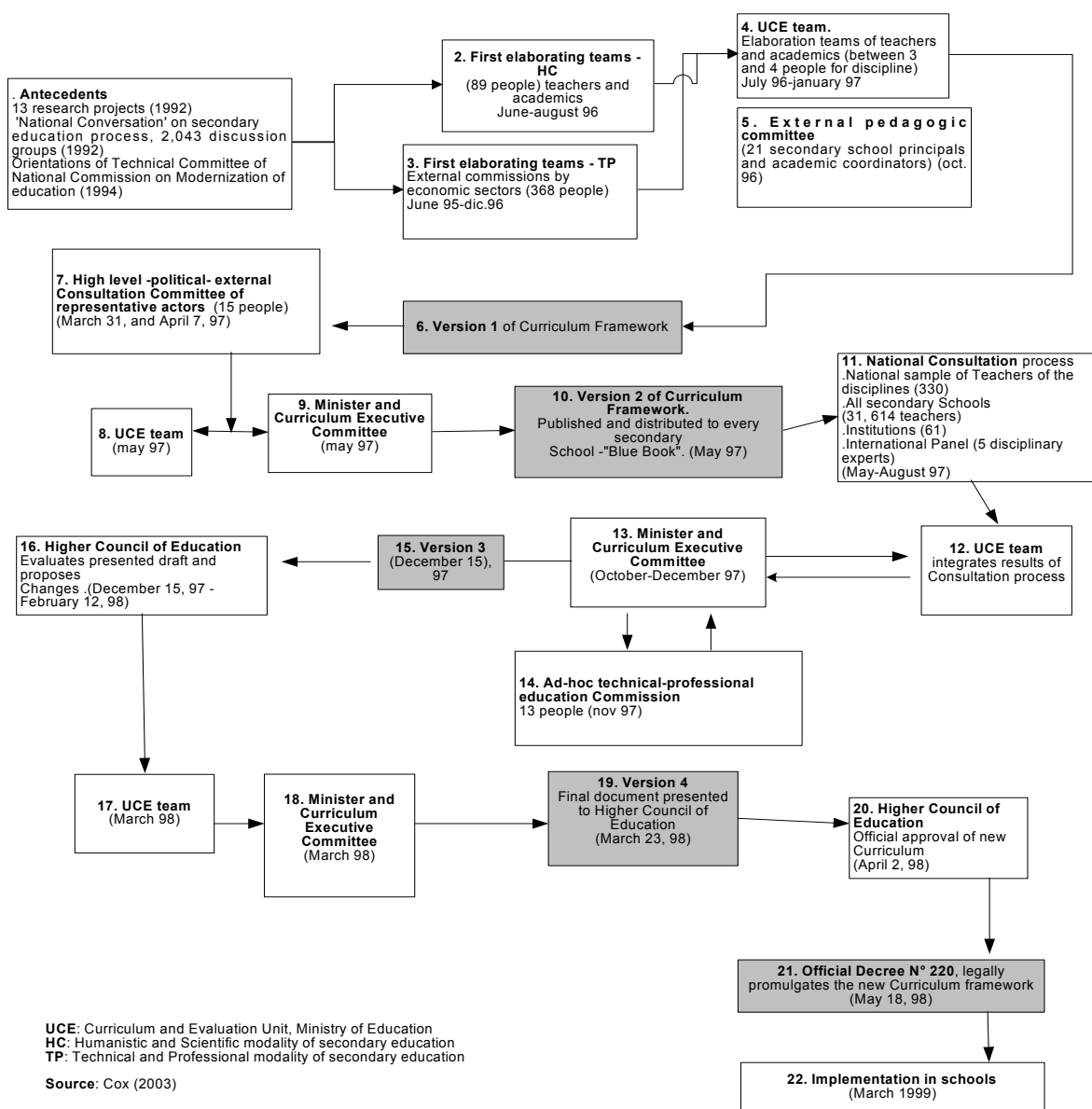
Thus, in Figure 1, if boxes 2 to 5 are considered, the generating bodies of the first draft of the new curriculum included the combination of academic and teachers which worked the framework for general education and the humanistic-scientific modality; external commissions for every industry of the productive field which produced the first definitions of the profiles of competencies to be offered in technical-professional education, (see Table 6 for the range of institutions per economic sector that participated) and an external *Pedagogic Committee*. The first 'political' consultation, designed to bring into play the evaluative vision of key stakeholders and ideologies was via a high level *Consultation Committee* of representative actors (Box 7). Their views were taken by the technical secretariat responsible for the process (*Curriculum and Evaluation Unit* of the Ministry) , and the political instance established as the final responsible authority: the Minister himself and a specially constituted *Curriculum Executive Committee* that supported him in the deliberation and final decision making (Boxes 8 and 9).

This basic structure, of a technical *cum* political internal body, which before deciding consults with external bodies, ad-hoc or institutionalized, specialized or massive, was repeated in its application three times: before versions 2, 3 and 4, of the new curriculum framework.

The most important and decisive of the cycles, because of its scale (system wide) and consequences (it made the Ministry alter its proposal), affected Version 2 of the framework. This one was subjected to a *National Consultation* process (Box 11) which included:

- a consultation to a national sample of teachers of each discipline (330 teachers)
- a consultation to 189 institutions, of which 60 reported back to the Ministry
- a consultation to every secondary school of the country, which had to evaluate the proposed curriculum by areas (each disciplinary department referred to its corresponding area). (31,614 teachers participated, answering a survey which included open-ended questions).

Figure 1: Institutions, actors and phases in the elaboration of a national curriculum framework for secondary education (1992-1998)



It is not possible to give account in a short space of the main features -substantive and procedural- of each of the stages schematized in Figure 1 . Suffice it to say that the essence of the progression of the different versions of the proposal was double: in substantive terms, the document grew nearer to its future users and sharper in form; in political terms, it became in each step better known and accepted by ever wider circles of stake-holders and users. The initial proposal by the Ministry (Version 2, 'Blue Book') was more radical in terms of innovation than the finally approved one. However, the loss in innovation-value was a gain in terms of implementation's feasibility.

Of all the changes implied by the new framework, only one had direct impact on teaching hours: the change in the balance between general and specialized education which re-structured technical-professional education. Indeed, the proposed new structure was rejected by the majority of teachers and schools of this modality. Teachers opinions against a time-structuring which in the final two grades of secondary education allocated 41% of the total to technical-professional subjects or specializations ,was supported by the main business corporations running technical *liceos* . The Ministry answered to this setting-up an *ad-hoc* commission which involved all the key stakeholders, and started a process of discussion and negotiation which took place in November 1997, -immediately after the results of the National Consultation had been systematized-: the Ministry finally accepted increasing the time for technical-professional subjects from 41% to 62% of the total of the final two years of secondary education .

Implementation

Evidence on the implementation of the new curriculum and the gradual nature of the process of its appropriation by teachers is provided by evidence consisting in teachers' declared curriculum coverage, by subject and grade. It is evidently a proxy of what is actually happening in classrooms, but the pattern it reveals shows that it is an adequate one. In fact, the data in the following Table permits to observe that: i) there is an important increment of the declared curricular coverage between the first and the second year of implementation of the changes, independently of the subject: familiarity with the innovation increases coverage; ii) there are differences between subjects, with Biology and Language in 1st Grade, in the second year of implementation (2000), showing the lowest coverage (53.1 and 52.4%, of the teachers declaring that they covered "all or ¾ of the curriculum" respectively); iii) the lowest relative curricular coverage may be linked to three different effects: 'change of paradigm' effect, -the new curriculum has been *structured* in a way which is radically new to teachers-, 'length effect' –the new programs of study are just too extended for teachers' standards-, and finally, the 'new contents' effect –or the curriculum covering content areas in which teachers have no previous experience or preparation -.

Table 9: Teachers' declared curricular coverage, in selected subjects. 1999-2002

Language	% of teachers that declare total or ¾ coverage	History and Social Sciences	% of teachers that declare total or ¾ coverage

1° grade 1999	34.3%	1° Medio1999	48.5%
1° grade 2000	53.1%	1° Medio2000	79.1%
2° grade 2000	65.5%	2° Medio2000	65.7%
2° grade 2001	73.0%	2° Medio2001	78.4%
3° grade 2001	64.2%	3° Medio2001	70.5%
3° grade 2002	65.3%	3° Medio2002	87.0%
Matemáticas		Biology	
1° Medio 1999	61.9%	1° Medio1999	29.8%
1° Medio2000	68.5%	1° Medio2000	52.4%
2° Medio2000	75.3%	2° Medio2000	63.5%
2° Medio2001	81.2%	2° Medio2001	75.2%
3° Medio2001	79.0%	3° Medio2001	74.4%
3° Medio2002	80.2%	3° Medio2002	77.5%

Source: Ministerio de Educación, UCE (2002) ⁵

REFERENCES

Charles Hood (1983) *The tools of government*, Macmillan, London.

Comisión Nacional para la Modernización de la Educación (1994), Informe de la Comisión Nacional para la Modernización de la Educación, *Los desafíos de la educación Chilena frente al Siglo XXI*, Editorial Universitaria. Santiago.

Cox, C. (2003), Las políticas educacionales de Chile en las últimas dos décadas del siglo XX, en C. Cox (editor) *“Políticas educacionales en el cambio de siglo: La reforma del sistema escolar de Chile”*, Editorial Universitaria.

Cox, C. (2004), La reforma del currículum, en R.Hevia (Editor), *Educación en Chile Hoy*, LOM, Santiago.

Delannoy, Françoise, (2000) *Education Reforms in Chile, 1980-1998: a lesson in pragmatism.*, The World Bank, Country Studies, Education Reform and Management Publication Series. Vol. 1, N° 1, June.

Gysling, 2003, Reforma Curricular: Itinerario de una transformación cultural, en C. Cox (editor) *“Políticas educacionales en el cambio de siglo: La reforma del sistema escolar de Chile”*, Editorial Universitaria, diciembre 2003.

Ministerio de Educación, (1991 – 2000, 2002) *Compendio Información Estadística , years 1991, 1997, 1998,2000, 2002, Santiago.*

Ministerio de Educación (1993), Programa MECE, *Informe Conversación Nacional sobre Educación Media*, Cuadro N°1 Santiago

⁵ The information in Table 9 is the result of surveys to national probabilistic samples of teachers: 756 teachers of Grade 1 from 146 schools in 2000; 1,375 teachers from Grade 2, from 292 schools in 2001; and 839 teachers from Grade 3, from 292 schools in year 2002. The surveys were carried out by *Unidad de Currículum y Evaluación*, of the Ministry of Education.

Ministerio de Educación (1997), *Objetivos Fundamentales y Contenidos Mínimos Obligatorios de la Educación Media, Versión para Consulta Nacional*, Santiago.

Ministerio de Educación (1998) Decreto N° 220,. *Objetivos Fundamentales y Contenidos Mínimos Obligatorios de la Educación Media*, Santiago.

Ministerio de Educación, Unidad de Currículum y Evaluación, Unidad de Seguimiento. (2002) “Informe Descriptivo Consulta de Planes de Estudio Tercer año Medio 2001”, Documento de trabajo N° 17, Santiago.

Miranda, Martín (2003), *Transformación de la Educación Media Técnico-Profesional*, in, C.Cox (2003), *Políticas educacionales en el cambio de siglo. La reforma del sistema escolar de Chile*. Editorial Universitaria. Santiago.

Moura Castro, C., M.Carnoy (1998), *Secondary Schools and the transition to work*, Inter-American Development Bank, Background Education Strategy Paper N°3, Washington.

OECD (1994), *The curriculum redefined: Schooling for the 21st century*, Paris.

OECD (2004), *Reviews of National Policies of Education. CHILE*, Paris.

Picazo, Inés (2001), *Controversias y debates en la reforma del currículum escolar chileno durante los años 90*, Mimeo, Depto. de Administración Pública y Ciencia Política, Universidad de Concepción.

Trow, M. (1977), *The second transformation of American secondary education*, in J.Karabel, A.H.Halsey (eds.) *Power and Ideology in education*, Oxford University Press, Oxford, New York.