


Encounters in Theory and History of Education
Rencontres en Théorie et Histoire de l'Éducation
Encuentros en Teoría e Historia de la Educación



Military Dictatorship, University Reform, and Teacher Education in Chile: The Historical Emergence of a Dysfunctional Structure

Dictature militaire, réforme universitaire et formation des enseignants au Chili : l'émergence historique d'une structure dysfonctionnelle

Dictadura militar, reforma universitaria y formación de docentes en Chile: La emergencia histórica de una estructura disfuncional

Cristián Cox  and Macarena Sánchez Bachman 

Volume 24, 2023

Conceptions and Practices of Education in a "Longue Durée"
Approach: Paths to a Critical Self-Reflexive History of Education

URI: <https://id.erudit.org/iderudit/1109120ar>

DOI: <https://doi.org/10.24908/encounters.v24i0.16593>

[See table of contents](#)

Publisher(s)

Faculty of Education, Queen's University

ISSN

2560-8371 (digital)

[Explore this journal](#)

Article abstract

The article describes the evolution of public policies related to teacher education in Chile during the period of the military dictatorship (1973-1990) and the paradoxical impact of university reform in teacher education at the end of the 1960s. Both processes are connected to examine the roots of the inability of teacher education to meet the necessary requirements following the structural changes produced by the 1960 reform. The reform extended primary education by two grades, thereby broadening and complexifying both the curriculum and the student population. Given that the initial implementation of the reform coincided with the political crisis that culminated in the coup d'état, it can be understood why neither teacher education policies nor teacher preparation institutions responded to this change. Unfortunately, during the quarter of a century that followed, there was a persistent failure to adapt to the changes that the 1960 reform had wrought. Thus, a dysfunctional structure of teacher education remained, one that did not respond to the structure of the school system it sought to serve. In terms of its analytical and interpretative purpose, the paper combines historical policy analysis, sociological interpretation of the dynamics of higher education, and an extended analysis of how disciplinary and pedagogical knowledge came to be disconnected in teacher education.

Cite this article

Cox, C. & Sánchez Bachman, M. (2023). Military Dictatorship, University Reform, and Teacher Education in Chile: The Historical Emergence of a Dysfunctional Structure. *Encounters in Theory and History of Education / Rencontres en Théorie et Histoire de l'Éducation / Encuentros en Teoría e Historia de la Educación*, 24, 65–85.
<https://doi.org/10.24908/encounters.v24i0.16593>

© Cristián Cox and Macarena Sánchez Bachman, 2023



This document is protected by copyright law. Use of the services of Érudit (including reproduction) is subject to its terms and conditions, which can be viewed online.

<https://apropos.erudit.org/en/users/policy-on-use/>

érudit

This article is disseminated and preserved by Érudit.

Érudit is a non-profit inter-university consortium of the Université de Montréal, Université Laval, and the Université du Québec à Montréal. Its mission is to promote and disseminate research.

<https://www.erudit.org/en/>

Military Dictatorship, University Reform, and Teacher Education in Chile: The Historical Emergence of a Dysfunctional Structure¹

Cristián Cox

Universidad Diego Portales

Macarena Sanchez Bachmann

Universidad Diego Portales

Abstract

The article describes the evolution of public policies related to teacher education in Chile during the period of the military dictatorship (1973-1990) and the paradoxical impact of university reform in teacher education at the end of the 1960s. Both processes are connected to examine the roots of the inability of teacher education to meet the necessary requirements following the structural changes produced by the 1960 reform. The reform extended primary education by two grades, thereby broadening and complexifying both the curriculum and the student population. Given that the initial implementation of the reform coincided with the political crisis that culminated in the coup d'état, it can be understood why neither teacher education policies nor teacher preparation institutions responded to this change. Unfortunately, during the quarter of a century that followed, there was a persistent failure to adapt to the changes that the 1960 reform had wrought. Thus, a dysfunctional structure of teacher education remained, one that did not respond to the structure of the school system it sought to serve. In terms of its analytical and interpretative purpose, the paper combines historical policy analysis, sociological interpretation of the dynamics

¹ This article was carried out with the financial support of FONDECYT Project No. 1221560 of the Agencia Nacional de Investigación y Desarrollo (ANID) of Chile.

of higher education, and an extended analysis of how disciplinary and pedagogical knowledge came to be disconnected in teacher education.

Keywords: teacher education, policies, reform, dysfunctional, structure, dictatorship.

Dictadura militar, reforma universitaria y formación de docentes en Chile: La emergencia histórica de una estructura disfuncional

Resumen

El artículo aborda la evolución de las políticas públicas referidas a la formación de profesores en Chile en el período de la dictadura militar (1973-1990), y el impacto paradójico sobre tal formación de una reforma universitaria de fines de los años Sesenta. Ambos procesos son conectados para examinar las raíces de la incapacidad del sistema de formación de docentes de responder a los requerimientos de una reforma de la estructura del sistema escolar que tiene lugar también a fines de la década de 1960. Tal reforma, prolongó en dos grados la educación primaria, y con ello amplió y complejizó tanto el currículo como las necesidades de los estudiantes. La respuesta a este cambio de parte de las políticas referidas a la formación de docentes, como de las instituciones formadoras mismas, no tuvo lugar, ni en el momento del inicio de su implementación, que coincide con la crisis política que culmina con el golpe de estado, ni en el siguiente cuarto de siglo. Larga duración que establece una estructura disfuncional de formación de docentes, que no responde a la estructura del sistema escolar al que busca servir. En función de su propósito analítico e interpretativo, el trabajo combina análisis histórico de políticas, interpretación sociológica de dinámicas de la educación superior, y análisis de la separación del conocimiento disciplinario y el pedagógico en la formación de profesores del período examinado.

Palabras clave: formación docente, políticas, reforma, disfuncional, estructura, dictadura

Dictature militaire, réforme universitaire et formation des enseignants au Chili : l'émergence historique d'une structure dysfonctionnelle

Résumé

L'article traite de l'évolution des politiques publiques en matière de formation des enseignants au Chili pendant la période de la dictature militaire (1973-1990) et de

l'impact paradoxal sur la formation des enseignants d'une réforme universitaire à la fin des années 1960. Ces deux processus sont mis en relation afin d'examiner les causes de l'incapacité du système de formation des enseignants à répondre aux exigences d'une réforme de la structure du système scolaire qui a également eu lieu à la fin des années 1960. Cette réforme a prolongé l'enseignement primaire de deux années, élargissant et complexifiant ainsi à la fois le programme et les besoins des élèves. La réponse à ce changement, tant du côté des politiques que des institutions de formation des enseignants, n'a eu lieu ni au moment de sa mise en œuvre, qui a coïncidé avec la crise politique qui a culminé avec le coup d'État, ni au cours du quart de siècle qui a suivi. La longue durée du système établit une structure de formation des enseignants dysfonctionnelle, qui ne répond pas à la structure du système scolaire qu'elle cherche à servir. En termes d'analyse et d'interprétation, le document combine l'analyse historique de la politique, l'interprétation sociologique de la dynamique de l'enseignement supérieur, et les catégories et l'interprétation des bases de connaissances de la profession d'enseignant.

Mots clés : formation des enseignants, politique, réforme, dysfonctionnement, structure, dictature

Introduction

In its post-independence historical origins, teacher education in Chile was born bifurcated, with normal schools under the Ministry of Education serving primary education and universities preparing teachers for a secondary education that was highly selective. This pattern was inaugurated in 1842 with the founding of the first normal school and acquired its stable institutional form with the founding of the Pedagogical Institute of the Universidad de Chile in 1889.² Teacher education continued in this way for more than a century but came to an abrupt end in 1974 when a recently imposed military dictatorship decreed the closure of the seventeen existing public normal schools and the transfer of their students and part of their faculty to the nearest state university (Cox and Gysling, 1990).³ Thus, the university-only institutional basis of teacher education in the country dates back to this political decision of 1974. However, structural features of its public regulation were transformed in the 1980s—while the dictatorship was well entrenched—when state

² The country imported teachers from Prussia who brought with them the pedagogical doctrines of J. F. Herbart and strong beliefs in the power of scientific methods to raise the quality of secondary education teachers of the time (Cox and Gysling, 1990; Labarca, 1939; Perl, 2010).

³ The end of the teacher education colleges, or “normal schools” as they were known in Chile, was justified by the authorities of the time in terms of responding to the long-expressed demand for the unification of teacher education. This justification is, however, inseparable from the fact that for the National Security doctrine supported by the new regime, it was an “enemy” institution, controlled by leftist sectors.

regulatory principles were substituted with market ones. These vectors of change stem from the authoritarian regime established after the tragic 1973 coup d'état.

Public and research attention, then and subsequently, have mostly focused on the radical changes imposed by the threat and use of violence of authoritarian political power. The breakdown of democracy and its implications overshadowed another major change in education that had been implemented just a few years before the coup (1968-1970). This change was a reform of the school system's structure, consisting of a redefinition of the grades of primary and secondary education: from a 6-6 structure for primary and secondary school to a primary level of eight grades and a secondary level of four grades. The extension of the primary grades had a direct impact on teaching. The new structure not only increased the complexity of the curriculum to be taught but also confronted primary schoolteachers with the needs of the newly added adolescent students in grades 7 and 8.

With this structural change, a new type of teacher preparation was needed: more specialized in terms of both disciplinary and pedagogical knowledge. In retrospect, that this need was not met in the first years after the breakdown of democracy can be understood. What does merit historical and sociological research and analysis is the answer to the question of how it is that for the next almost quarter of a century (1973-1996)⁴ neither educational policies nor teacher education institutions addressed this need. This failure to adjust teacher education to the new structure led to dysfunction attributable to the institutional and curricular factors that unintentionally converged (Archer, 1995) so that aspiring teaching professionals were provided learning opportunities with systematic deficiencies or gaps as far as the requirements of their future performance in the classroom.

The purpose of this article is to try to answer for the roots of maintaining what shall be substantiated as a long-lasting dysfunctional structure in the preparation of teachers in Chile. The proposed line of argument demands an examination of the history of public policies related to teacher education during the military dictatorship (1973-1990), as well as an analysis of a university reform that preceded it (1967-1973) and its paradoxical implications for the faculties of education. As will be seen, these teacher-education programs were weakened in their academic base, precisely in their disciplinary knowledge component, as much of the leadership of their disciplinary departments migrated within their universities to establish new research-oriented faculties.

What follows is organized in three sections. Section one is dedicated to the policies of the military dictatorship, which belong to two clearly distinct political and ideological phases of the authoritarian regime and translate into contrasting policies and a zigzagging trajectory. In section two, the complex and unexamined combination of processes internal to universities that generated a dysfunctional

⁴ In 1996 state policies in support of faculties of education were inaugurated, which sought to respond to the deficits in disciplinary and pedagogical knowledge observed in the predominant institutions' curricula. (Avalos, 2004)

structure for preparing primary-level teachers will be described and substantiated. A brief concluding third section brings together the main threads of the analysis.

Teacher Education Policies During the Dictatorship

The general political character of the Chilean military dictatorship can be understood as evolving in two important stages (Valdes, 1989; Hunneus, 2000; Cavallo et. al. 2008): 1) military control of society following the National Security doctrine in the 1970s, and 2) the revolution of the economic and social model following neoliberal doctrines developed at the University of Chicago and adopted in the 1980s. The policies in teacher education follow purposes and resort to means that are aligned with these two stages, resulting in a zigzagging and contradictory trajectory. The first stage meant a rise in the status of primary education teacher education. However, this was followed by a policy in the opposite direction, which lowered the status of teacher education (both primary and secondary) by defining it, during the 1980s, as of non-university status. This sequence concluded with the enactment of the Organic Constitutional Law of Education (on the very last day of the dictatorship's government, March 10, 1990), which re-established the university character of teacher education. It is necessary to expand on the sequence sketched, distinguishing its “national security” and “radical neoliberal reform” phases.

End of Normal Schools

The end of the normal schools in 1974, within months of the coup d'état, had traumatic characteristics for the institutions and their actors because it took place in the context of the measures of violent force and purges of people, institutions, and ideas, which characterized the takeover of society by the military. The framework of illegitimacy and repression in which the closing of the normal schools was decided and implemented directly by the political power was superimposed on the longer and internal history of the educational system. It meant that the way teachers had historically been prepared had come to an abrupt end. In fact, normal school education itself had become a form of higher education in 1967. Universities by then also offered education for primary-level teachers in numbers comparable to those of the normal schools' enrollments.

However, teacher preparation through the normal schools also came to an end in the context of long-developing changes in the contexts and social groups of origin of the applicants to this level of education: their expectations were no longer satisfied by a secondary-level education, which implied the social mark of a semi-professional. In this context of competition between normal schools and university-level teacher preparation, an ad-hoc commission of academics from the Faculty of Education of the Universidad Católica of Chile was convened by the Ministry of Education. The commission contributed a critical diagnosis of this two-tier system that, to a crucial extent, repeated what the government of President Frei Montalva

had elaborated regarding *normalist* education years before.⁵ The commission also added new unfavorable antecedents about the crisis of enrollments, management and governance, politicization, and curricular and methodological anachronisms that by the end of the 1960s characterized the sector (Avalos and Reyes 2020; Pérez Navarro, 2017a).

To the set of factors mentioned, it should be added that the vision of a teacher education that would put an end to the institutional bifurcation between primary and secondary level teachers, which had visible social class features, also had deep and transversal roots in the educational field. In fact, the union leadership of primary education teachers had been advocating for a "unified teacher education" since the 1930s (Pérez-Navarro 2017b), and an agreement of the National Education Council in 1965 had stated the purpose of "achieving a single School of Pedagogy in the short term."⁶ Likewise, at the beginning of the 1970s, after a little less than a decade of coexistence of the two institutional forms of teacher education for the primary level, there was a consistent increase in enrollment in universities and a decline in normal schools.

An eloquent testimony about the convergence of the vision of the educational field regarding the convenience of ending the institutional division of teacher education was what a highly recognized teacher union leader, an opponent of the dictatorship, declared a decade later: "There also came a measure that could not fail to make us rejoice because it fulfilled an old aspiration: the single school of pedagogy. And [...] the determination to concentrate teacher education in universities" (Alfonso Bravo, in Cox and Gysling, 2009, p. 138).

The high drama inherent in the political and ideological justification of the military authority to put an end to a system that it considered to be controlled by Marxists, as well as the illegitimacy of the authority and the means on which its implementation rested, hide the fact that the demise of the normal schools had a structural basis in developments both of the educational system and society that had been evolving for the previous two decades. During the remainder of the 1970s, the regime's vision of teacher education policies focused on two issues: the lack of sufficiently qualified practicing teachers and the need for universities to devote energy to the preparation of teachers for primary education and not only for secondary education, as had been their historical trajectory. To address both issues, the Ministry of Education convened a committee with university representatives of the Council of Rectors to develop a certification program for teachers who were practicing without a valid degree, and common criteria to guide teacher education in the country as a whole (Gysling, 1988).

⁵ The Frei Montalva government had tried unsuccessfully to transform the normal schools: its proposal for change was supported by the Ford Foundation, which, in the political-cultural climate of the time, was enough for the proposal to be labelled "imperialist" and effectively blocked (Cox, 1984).

⁶ "General Indications on Teacher Education for the new structure of the School System" approved by the National Council of Education in sessions of September 28 and October 4, 1965. Cited in Bermudez, (1976).

The Committee fulfilled its mandate with respect to the certification program. This was implemented by the Ministry of Education and consisted of courses focused on disciplinary knowledge and pedagogy (40%) and study and production of materials (60%). As for the criteria for the country's teacher education institutions, the Committee agreed on the organization and duration of studies, selection procedures, and the main curricular components that should be included in education programs based on the curricula of the most traditional universities in the field (Avalos and Reyes, 2020; Gysling, 1988). However, despite the progress achieved by the committee, none of this was implemented because in 1981 the policy radically changed direction, and the notion was abandoned that a central body would bring together education institutions and the State in efforts to improve the sector.

The 1980's Big Bang: From State to Market Regulation

The next phase in the development of teacher education in the country was the result of a radical reform of higher education initiated by the authoritarian regime in 1981. This reform established three levels/types of institutions: universities, professional institutes (PIs), and technical education centers (TECs). At the same time, the reform reorganized the two state universities, which ceased to have campuses throughout the territory. More importantly, and following the ideas espoused by Milton Friedman's neoliberal vision, the reform lowered entry barriers to the creation of higher education institutions and programs and established market competition as the fundamental mechanism of governance and coordination of the sector (Brunner, 1992, 1993; Cox, 1988, 1996).

The Decrees with Force of Law (DFL) of 1981 abruptly and comprehensively transformed the regulation of higher education from state to market while also transforming its institutional architecture from only one type of institution to a hierarchy of three types (e.g., universities, PIs and TECs). In addition, the decrees established that the defining limit of the apex of such a system, the universities, would be their monopoly over the twelve careers they would have the exclusive right to offer. With respect to primary education programs, in opposition to what was defined in 1974—that normal schools were closed and primary teacher education upgraded to the universities—these were not included among the twelve careers that required a *licenciatura*, or academic degree,⁷ with which the DFL of 1981 statutorily sanctioned the semi-professional nature of school teaching.⁸ It is noteworthy that the measure neither argued nor justified in official documentation the abrupt turnaround from what had been decreed six years earlier with respect to the education of

⁷ The *licenciatura* degree concept to which the new norms of 1981 referred implied that more theoretical and/or more general and abstract knowledge components were required by some careers.

⁸ The twelve careers defined by the 1981 Decrees with Force of Law were Law, Architecture, Biochemistry, Dentistry, Agronomy, Civil Engineering, Commercial Engineering, Forestry Engineering, Medicine, Veterinary Medicine, Psychology, and Pharmaceutical Chemistry (Brunner, 1992).

primary education teachers. However, it removed the preparation of secondary education teachers from where it had been since the founding of the Pedagogical Institute of the Universidad de Chile in 1889.⁹ This most direct and official downgrading of the status of education careers continued until March 1990, when the Organic Constitutional Law of Education added primary, secondary, and special education to the twelve careers of the 1981 decrees.

The 1981 reform did not mean changes for the universities that then offered pedagogical studies because the new regulations defined that they could continue to offer all three types of careers established: technical, professional, and those requiring a *licenciatura* degree. However, the regime exempted from this the two state universities that prepared teachers and had a presence throughout the country: Universidad de Chile and Universidad Técnica del Estado. The regime's official diagnosis pointed out features of "inorganic and disproportionate growth [...] to reach levels of gigantism that have made their effective and good governance virtually impossible [making them] appetizing centers of political power entities that can finance political activism disguised as academic life."¹⁰ Both Universidad de Chile and Universidad Técnica del Estado were then forced to divest themselves of their regional campuses and their education programs. In the case of the Technical University, it ceased to offer pedagogical careers for technical-professional education. In the case of Universidad de Chile, its historical Pedagogical Institute in Santiago, as well as its education careers at its Valparaíso campus, were transformed by the 1981 legislation into "higher academies of pedagogical sciences," independent of their parent institution. In the following decade, both institutions evolved to become universities; Universidad Metropolitana de Ciencias de la Educación (UMCE) and Universidad de Playa Ancha (Avalos and Reyes, 2020; Brunner, 1992; Cox 1996).

The zigzag of the dictatorial regime's policies and their definitions, conceptualized by Avalos and Reyes (2020) as "uncertainty and neglect of teacher education," is ultimately about the character of the teaching profession and its knowledge bases. This zigzagging policymaking is explicable in terms of the field-origin (Bourdieu, 1979) of the actors that constituted the governing leadership and the internal tension that accompanied it throughout the period—on the one hand, the military world and its statist vision, and on the other, the civilian world of the technocracy formed at the University of Chicago (Valdés, 1989), commanding the pro-market revolution, not only of the economy but also of society and culture.¹¹

⁹ This was a measure with real effects for the creation of institutions and symbolic effects with respect to existing institutions because the universities that then had high school education programs (Pontificia Universidad Católica de Chile, Universidad de Concepción, Pontificia Universidad Católica de Valparaíso, Universidad Católica del Norte) maintained them.

¹⁰ Statement of the Ministry of the Interior on the New University Legislation, January 6, 1981, quoted in J.J. Brunner (1992: 51).

¹¹ The interpretation of the character of the civil-military dictatorship and its policies in terms of the ideological contradiction of its military and civilian actors and its sociological bases is a cornerstone in

While in the first stage, the policy was based on the vision of the military actor and articulated with representatives of the university educational field of the time; in the second, it was based on the vision of what, in Bourdieu's terms, is the field of material production and its new neoliberal ideologues that directly shaped and implemented the new paradigm.

The vision that this field had of the teaching profession and its knowledge bases would not be publicly formulated by the responsible actors; rather, they acted without giving official reasons for their measures to a public arena that did not exist. It is relevant here to keep in mind the distinction that three decades later was formulated in the international field of education by Fullan and Hargreaves (2012). These authors contrasted the vision that the fields of education and business have of school teaching in the 2000s. For the vision from education, which they labelled the “professional capital vision,” teaching is technically sophisticated and difficult, and quality teaching requires high levels of education and long periods of practical preparation. For the vision from business, which the authors labelled the “business capital vision,” teaching can be emotionally demanding but is technically simple, and good teaching does not demand long study and requires only moderate intellectual skills. This latter type of preparation corresponded to what the definitions of the 1981 decree laws characterized as the “second level” of higher education, the professional institutes. The *hubris* of the civil technocracy at the base of the regime caused it to ignore that, for a century-and-a-half, the country's universities had conceived the education of secondary education teachers as an intrinsic part of their work and mission, and that the inclusion of primary teacher education in the universities had been a matter of consensus in the educational field for decades.

Table 1 shows the evolution of the institutional configuration and enrollment in teacher education for the two decades from 1970 to 1990. The table shows some key features of the relationship between policies and the development of institutions. Most obvious is the disappearance of the *normalist* modality of teacher education, whose enrollment and part of its teaching body was integrated into universities from 1974 onwards. Then, what is evident is the opposite movement of a proportion of teacher education separated from the universities and its location in a new type of institution, the professional institutes. The enrollment in 1982, the year after the professional institutes' legal existence was established by decree (just over 8,000 students), comes first from the aforementioned redefinition of the legal status of the regional branches of the Chilean and state technical universities, which were separated from them and thus became part of the new institutional category.¹² Likewise, the enrollment comes from a group of public and private post-secondary education institutions existing prior to 1981, many of them created in the 1960s,

the literature on the general political interpretation of the regime; see Huneus (2000), Valdés (1989), as well as, specifically, on educational policies, Cox (1988; 1989) Brunner (1992), Lagos (1996).

¹² Professional institutes of Iquique, Chillán, Valdivia, Osorno, and academies of pedagogical sciences of Valparaíso and Santiago (Cox, 1992).

some of which opened education programs.¹³ The subsequent evolution of the professional institutes (PIs) is that all those of traditional university origin evolved into new regional state universities, while from 1988 onwards dozens of new private professional institutes were created (Brunner, 2009). The education enrollment corresponding to the technical education centers (TECs), on the other hand, exclusively includes careers for the education of technical personnel to support kindergarten educators.¹⁴

Table 1

Evolution of Enrollment by Types of Teacher Education Institutions, 1970-1990

Type of Institution	1970	1973	1974	1980	1982	1984	1986	1988	1990
Universities	23,446	40,895	43,635	34,159	19,773	20,522	27,097	22,321	15,371
Normal Schools	4,505 ¹⁵	7,646	----	----	----	----	----	----	----
Professional Institutes	----	----	----	----	8,281	10,179	10,840	9,929	8,288
Technical Education Centers	----	-----	----	----	1,110	2,205	3,892	2,855	1,437
Total	27,951	48,511	43,635	34,159	29,164	32,906	41,829	35,105	25,096

Source: Author, based on enrollment data for universities and non-university Higher Education, 1970-1990 in *Indicadores económicos y sociales de Chile 1960- 2000*, Banco Central (2001); enrollment in Normal Schools in Carcovic (1971) and Cox and Gysling (1990); enrollment in Professional Institutes in Cox (1992); enrollment in Technical Centers in Courard (1992).

In terms of teacher education policies, the period of the dictatorship ended with the promulgation of the Organic Constitutional Law on Education (LOCE) on March 10, 1990, one day before the watershed that established the inauguration of the Aylwin Presidency and, with it, the beginning of the transition to democracy. The LOCE establishes that education careers can only be offered by universities, thus

¹³ Such as IPEVE, EDUCARES, Blas Cañas, Manpower, DUOC, INACAP (Cox, 1992).

¹⁴ As in the case of the PIs, the TECs were constituted from a sector of academies, institutes, and schools (equivalent denominations given to establishments that taught trades), the majority of which were private, outside of regular education, and which the new legislation regularized while raising their admission requirements and subjecting them to supervision by the Ministry of Education (Courard, 1992).

¹⁵ In 1971, the total normal school enrollment was 6,011 students, distributed as follows: 5,656 state-run, 325 private; males 1,456, females, 4,545. See Superintendencia de Educación Pública, Sección Estadística (1971) Matrícula Año 1971 (May). Santiago.

adding them to the twelve careers of the 1981 DFL and reversing the definition of that time.¹⁶

The description of the 1973-1990 period and the policies of the dictatorship have highlighted the distinction between the dictatorship's first stage, hegemonized by the vision of the military actor, and the second stage, by civilian actors with a neoliberal stance. The ideologies of the two could not be more in contrast. In the first stage, statism and national security were the ruling doctrines, while in the second stage the vision of freedom was to create institutions and competition as guiding principles and mechanisms for the regulation of education. The clear and evident distinction of actors and the stages that each one hegemonized must be complemented with the major fact of their articulation: the use of force did not cease to be exercised during the 80s; the political-ideological control by the Ministry of the Interior over each new university or professional institute project was exercised throughout the period, and the decision to cease the creation of new institutions—between 1983 and 1987—was implemented through this Ministry. The two great justifications of the educational policy of the period, national security and the transition from bureaucratic-state regulation to market regulation, in their practical realization are interwoven throughout the 1980s, even though the latter occupies practically the entire scenario and is where most of the interpretative efforts of the period have concentrated.

However, the distinctive mark of the policies of the 1980s, the focal point that concentrated governmental energy, is the breaking-up of what the policymakers of the regime defined as the monopoly of a reduced number of universities over the development of higher education: the opening of higher education, therefore, to new institutions and careers, and to competition among them for students and reputation. From this fundamental definition of the 1981 reform, all the energy of the restricted field of policy elaboration and implementation of the time concentrated on the dispute between regulators and de-regulators over the opening and closing of institutions and careers, as well as over the control of examinations of graduates from new institutions. This is the new phenomenon of academic capitalism at its dawn,¹⁷ and the tentative development of norms for its regulation. These resulted in processes which, in their socio-political basis, generated the struggle between the logic of the field of education—centered on the quality of programs and graduates, as well as the validity of exams and certificates—and the logic of academic capitalism, encouraged by the opening of the sector to new institutions and entrepreneurial forces and actors (Brunner, 1993).

It is not difficult to see that the whole of the new established game has little or no bearing on the quality of teacher education or what is happening within the

¹⁶ Article 52 of LOCE (Law 18.962) stipulates that professional degrees that require a bachelor's degree include Primary Education, Secondary Education, Special Education, and Early Childhood Education.

¹⁷ Academic capitalism in this context refers to the use by institutions of varied competitive strategies in the student market according to their position in the field of higher education and their "relative place in the selective cascade and the territorial and knowledge area markets in which they operate" (Brunner, 2015, p.47). For a current view of this key concept, see Brunner, et al. (2021).

educational institutions with respect to their new generations of students and their formative trajectories. It is as if the pro-market rules and incentives pushed the educational leadership of the institutions to the background, while their administrative and managerial leadership moved to the forefront as they sought to interpret and manage market opportunities (of student enrollment, of academics, of institutional reputations) and the emerging rules (of opening institutions and careers, and of examinations of the new institutions by the existing ones).

In short, processes were triggered by the redefinition of institutional limits and control mechanisms—market (incentives) or state (norms)—none of which involved the essential tasks of education institutions, communicative processes of knowledge, and the practical construction of skills and attitudes that define the processes of preparing professional teachers. The transition to democracy, and the change of government and its inspirational ideas, will mean a fundamental change in this regard that will take place gradually, spanning more than a decade.

Persistence of a Dysfunctional Structure

The crisis of democracy and the coup d'état, with its consequences of university intervention and the termination of the normal schools, coincided with a profound, endogenously generated reform of the universities. These events converged to determine a pattern of development of the field of teacher education institutions that would last for more than two decades, which this section will attempt to characterize both in its genesis and its implications.

How did the universities receive the faculty and students coming from the normal schools? How did the newcomers adapt to their redefined institutional context? These questions were not publicly articulated or discussed at the time of the transfers, nor in the following decade-and-a-half of university and school system scrutiny. The features of the external context and its characteristics of crisis and exceptionality prevented any public discourse or articulation of an alternative vision on the consequences of these and many other major changes.

In effect, the path of institutional definition of the preparation of teachers for the recently reformed primary education of the country that began in 1974 is the result of a combination of exceptional circumstances, both internal and external to the university system of the time. The former refers to a broad process of university reform (at the end of the 1960s and the beginning of the 1970s); the latter to the exceptional political circumstances of the breakdown of democracy and the authoritarian order that followed. This path led to the distancing of teacher education from the school system it was intended to serve. It also led to the fragmentation of the knowledge base of its formative processes, to the extent that no university generated adequate organizational responses for a constructive encounter between the bearers of disciplinary knowledge and the bearers of pedagogical knowledge, an encounter on which the quality of teacher education, to a decisive extent, rests (Shulman, 2004).

Two factors of very different origins converged in the motivation of new university programs and education departments to move away from schools as fundamental references for the preparation of teachers. The first is both sociological and organizational in nature and is also common to many university systems. It relates to the “newcomer” syndrome of educators from the school system entering the university: their position as upstarts who naturally seek acceptance and recognition in their new environment. This acceptance is attained not through explicitly articulated strategies but instead through the everyday practices of a social and cultural adaptation effort, which drives educators to concur with the perceived “high-level” research and discourse of the academy. This led them to move away from their *normalist* background and shun their closeness to school culture, with, at the time, its implications of semi-professionalism (in the university), and the low status of working with children (in society). What sociologist of education David Labaree has identified in the United States as “the problem of schools of education” applied to the Chilean case at the time: the latest area of knowledge to arrive in university faculties, in an effort to gain status and recognition, turns its back on schools and turns instead toward what it perceives as the theoretical and research *ethos* of the new institution and its context (Labaree, 2004).¹⁸

A second factor that affected teacher education and this distancing from the school world comes directly from the dictatorial political context and its National Security ideology, which instigated the military regime’s intervention and direct control of the governance of each university of the country. The “surveilled university,” famously denounced by reputed Chilean philosopher Jorge Millas in 1974 (Millas, 2012),¹⁹ meant the control and watchful eyes of the military were pervasive throughout education. This close observation made it extraordinarily difficult for teacher education during the entire period of the authoritarian regime, but especially during the 1970s, to connect with schools and establish even the minimal coordination for the realization of a practicum by their students that would have introduced them to the complexities of the classroom and the students that the teachers were tasked to teach, particularly in the new grades (7th and 8th) of the reformed primary level.

The breakdown of democracy, and the authoritarian regime that followed, affected the role of the university in the preparation of teachers, especially those in primary education. An intervened university leadership (with army and navy officers as rectors), which interpreted the institutions within its National Security doctrine, was not in a position to understand, much less act, with respect to education careers with a vision of the new challenge they faced as a result of the reform of the structure and curriculum of the school system that a few years earlier had taken place. In fact, as mentioned in the Introduction, the reform of the 1960s had changed the structure

¹⁸ “Historically, teacher education had the misfortune to arrive in the realm of higher education after all the top positions were filled” (Labaree, 2005, p. 187).

¹⁹ The is translated from the *Universidad vigilada* in Spanish.

of the school system from six years of primary education and six of secondary education to the structure of eight grades of primary education and four of secondary education, still in force.²⁰ The direct significance of this change on elementary school teachers is that they had to teach the entire curriculum in two additional grades—the new 7th and 8th grades—a level where the disciplinary content that for more than a century had been the domain of the selective secondary education was notoriously densified, and where teachers were characterized by their specialization in a single subject.

Traditionally, schoolteachers trained in the normal schools had been prepared to teach the entire curriculum, but only up to the fourth grade. During the 1950s this had been extended to the sixth grade. Now, the "primary education" reform extended this by two additional grades. It is only attributable to the exceptionality of the times that no action was taken at that time regarding the preparation of the new teachers required for this expanded and new primary education. As previously mentioned, there was no action then at the policy level, nor at the institutional level, nor during the following quarter of a century. In fact, a major anomaly—the assumption that it was reasonable to prepare teachers to teach all areas of the national curriculum (language, mathematics, history and social sciences, natural sciences, foreign language, art, manual arts, physical education) up to the eighth grade—came to be seen as unremarkable, even invisible, during the 1970s.

The faculties of education—as mentioned, separated from the school institutions, with many staffed by newcomers to military-controlled universities—were not in a position to raise their voices and attempt a response, especially in their condition under surveillance in a society without a public arena.²¹ In general, the schools of education in the universities continued with their traditional practices; that is, those that had prevailed in the normal schools with their focus on methods rather than disciplinary knowledge; knowledge that future teachers supposedly had already acquired in their secondary school years. Far from the education institutions, the country's education policy did not perceive a problem in this regard until the mid-1990s. However, in the very long period in between, the school system reacted in a predictable manner: the schools with more resources, which served the middle and upper-income groups, resorted to secondary level teachers to teach in the two new grades of elementary school, while most had elementary school teachers unprepared in their disciplinary knowledge to teach the upper grades (Cox, 2007; OECD, 2004).

Thus it was not until after the transition to democracy, and in a context of political recognition as priority and cultural openness of education, that the first public policy attempt to support the renewal of teacher education (the Program for

²⁰ The General Education Law of 2009 determined a return to the 6-6 structure, which at the time of writing (2023) has not yet been implemented.

²¹ A decree of the early 1980s prohibited municipal education teachers from attending seminars or courses in their free time that dealt with "aspects of the national reality" S. Magendzo and C. Gazmuri (1981).

Strengthening Initial Teacher Education) would diagnose the systematic absence of coherently supervised practices and the disconnection of teacher education with schools as a key and priority problem to be addressed (Avalos, 2002).

There is a third factor shaping the trajectory initiated four decades ago by teacher education in Chile, which is endogenous to the universities and inseparable from the profound reform process they underwent between 1967 and 1973. The reform of the 1960s included a substantive expansion of coverage by the eight universities existing at the time,²² the democratization of their governance structure (Cox and Courard, 1990), and an "explosion of internal horizontal differentiation processes" (Brunner, 2015, p. 28) in which new courses, programs, units, departments, institutes, and faculties were created, while at the same time new entities multiplied for the connection of the university with society. Thus:

At the strictly academic-disciplinary level, the new departments, centers and institutes account for the beginning of an initial displacement of the center of gravity from the undergraduate teaching function: until that moment the almost exclusive concern of the universities towards the research function, an activity that timidly begins to settle in these units giving rise to a modern academic profession based on highly qualified personnel, dedicated to live not only for the university, but from it, and also carrying a new organizational ideology that supports the supremacy of the production of knowledge over its mere transmission (Brunner, 2015, p. 31).

The turn that José J. Brunner describes as a fundamental mark of the university reform of the 1960s in the academic dimension meant the creation of disciplinary faculties—history, literature, biology, chemistry, physics, mathematics—distinct from the professional faculties that had constituted and characterized the university until then. For faculties or schools of education that had been preparing teachers for secondary education in the above disciplines for decades, the general process of growth, internal differentiation, and the gradual shift towards research by their university had a paradoxical result: they were significantly weakened, as their disciplinary departments—one for each area of knowledge of the school curriculum—saw their best academics work first on the establishment, and later on the development of new research-oriented disciplinary faculties. An account of the evolution of the Faculty of Education of the Universidad Católica of Chile, by historian Ricardo Krebs, is unequivocal about the paradoxical impact of the university reform of the 1960s:

With the reform [...] the School of Education found favorable possibilities to expand its specific activities, to increase its teaching staff, and to initiate a whole new educational policy. On the other hand, all the Departments of Specialties

²² In the period between 1967 and 1973 known as "the university reform," the total enrollment of the sector jumped from 55,000 to 145,000 students, or from 7.1% to 16.8% gross coverage of the corresponding age group (Brunner, 2009: 128).

were cut off from it and lost control over the scientific preparation of students (Krebs, 1992, p. 50).

Contemporary processes of separation of disciplinary departments from their original trunk in faculties or schools of education were taking place at the Universidad de Chile and the Universidad de Concepción: the Faculty of Philosophy and Education of the former distinguished “central departments” (philosophy and letters, mathematics and natural sciences, social sciences) from “professional schools,” while the Pedagogical Institute was defined as a professional school. These central departments were equivalent to the “institutes” of the Universidad Católica and to the “central institutes” of the Universidad de Concepción. Thus, in the three main universities that prepared teachers (of the eight existing at the time), the impetus for change is the same: to separate scientific production from the professional schools “so that science could develop according to its own internal principles and not circumscribed to the limits defined by reference to a specific profession” (Cox and Gysling, 1990, p.139).

In the following decades, the new faculties in which the sciences were cultivated did not cooperate or have constructive relations in the preparation of primary and secondary school teachers with what historically can be considered as their parent faculty. The common original institution in this case has complicated rather than facilitated cooperation. In fact, in practically every university where this relationship is present,²³ henceforth a pattern of distancing or open conflict between the bearers of disciplinary knowledge and the bearers of pedagogical knowledge predominates, to the detriment of the coherence and effectiveness of the teacher education offered.

Conclusion

In sum, both exogenous and endogenous processes of change affecting universities in the late sixties and mid-seventies established a *trajectory* that deepened and became increasingly difficult to redefine (or “get out of”) over time, and which has the structuring characteristics described above.²⁴ The main effects can be summarized in terms of two paradoxes. The first paradox is that the absorption of teacher education for primary education by the universities meant its distancing from the schools for internal reasons (of adaptation to the new environment), as well as external ones (authoritarian controls on access to schools). The second paradox is

²³ This takes place with common features in practically all the institutions that nowadays in Chile are categorized as “traditional universities” gathered in the Council of Rectors of Chilean Universities. There are two recent works on the history of teacher education in Chile that address this phenomenon: the historical analysis that Carmen Montecinos and Nelson Vásquez produced for the *International Handbook of Teacher Education. Vol. 1*, edited by John Loughran (see chapter by Placier et al., 2016); and the book by Beatrice Avalos and Leonora Reyes (2020), which in Chapter 7 refers to the tensions between the Faculty of Philosophy and Humanities of the Universidad de Chile, which taught the disciplinary courses, and the Pedagogical Institute, which taught the pedagogical courses of the secondary education careers of that university before the breakup of 1973 and its intervention by the military.

²⁴ On the important concept of *path-dependence*, see Page (2006) and Pierson (2000).

that the modernization process, which initiated the shift from exclusively professional universities to research institutions with *full-time* academic staff, had an unplanned cost for teacher education institutions: the weakening of the faculties of education that had traditionally prepared secondary level teachers, as they lost their best academics in favor of the creation and development of new disciplinary faculties. These two paradoxes are accompanied by the anomaly of an institutional system of teacher education that, during the 1970s, came to see as unremarkable the fact of not preparing its graduates for the set of disciplines and the grades of primary education they would be teaching. Furthermore, this anomaly was not even seen as a problem by the policy field for the next quarter of a century.

In closing, it is necessary to return to what has been referred to as the dysfunctional structure of teacher education, against which post-2000 education policies visibly constitute a systematic reaction (Avalos et al., 2020). "Dysfunctional," as mentioned at the start, means institutional and curricular arrangements that converge to produce learning opportunities for the student teachers that exhibit systematic deficiencies or gaps regarding requirements they will be asked to satisfy in their future teaching. These are gaps in what the literature on teacher education identifies as disciplinary knowledge, one of the two pillars of the essential and defining knowledge bases of the profession, expressed by Shulman's (1986, 1987) concept of "pedagogical content knowledge" (PCK). The genesis of this has been linked to the complex web of external and internal education factors, which include i) the military coup and the dire consequences of direct military control of both universities and schools during the '70s, ii) the '80s' policy focus on the paradigm change from state to market-driven as regulatory principles of universities with no attention to the quality of teacher education and its requirements of support and national guidelines, and iii) the least visible, but profoundly enduring effects of a university reform of the late 1960s and 1970s, which paradoxically weakened teacher education faculties in the nucleus of their capacities to provide the knowledge bases of the teaching profession (Darling-Hammond et al., 2004).

The effects of disconnection of the constituent elements of PCK due to the precariousness or non-existence of the disciplinary component in the education of primary education teachers can be validly identified as the core of the "dysfunctionality" whose historical and structural origins we have attempted to make visible here. Its implications for teaching performance in the school system have been identified again and again, in a systematic and convergent way, by international and national evaluations of different types (TIMSS 1999; World Bank, 2001; OECD, 2004; Avalos and Matus, 2010; Mineduc-INICIA, 2012; Tatto, et. al., 2012), but the full picture is revealed only in retrospect. The post-hoc judgment produced by research is anachronic, as the vision on which it is based was not that of the actors in each of the described configurations in which they acted, but the one that emerges historically.

References

- Archer, M.S. (1995) *Realist Social Theory. The Morphogenetic Approach*. Cambridge University Press.
- Ávalos, B. (2002). *Profesores para Chile. Historia de un Proyecto*. Ministerio de Educación.
- Ávalos, B., & Matus, C. (2010). *La formación inicial docente en Chile desde una óptica internacional: Informe nacional del estudio internacional IEA TEDS-M*. Ministerio de Educación.
- Ávalos, B., & Reyes, L. (2020). *Historical Development of Teacher Education in Chile: Facts, Policies and Issues*. Emerald Publishing Limited. <https://doi.org/10.1108/9781789735291>.
- Banco Central. (2001). *Indicadores económicos y sociales de Chile 1960-2000*. Banco Central.
- Bourdieu, P. (1979). *La distinction: Critique sociale du jugement*. Éditions de Minuit.
- Brunner, J. J. (1992). "La Educación Superior en Chile: 1960-1990. Evolución y políticas." In J. J. Brunner, H. Courard, & C. Cox (Eds.), *Estado, mercado y conocimiento: Políticas y resultados en la educación superior chilena 1960—1990* (pp. 3–123). FLACSO.
- Brunner, J. J. (1993). "Higher Education in Chile from 1980 to 1990." *European Journal of Education*, 28(1), 71. <https://doi.org/10.2307/1503822>.
- Brunner, J. J. (2009). *Educación superior en Chile: Instituciones, mercados y políticas gubernamentales (1967-2007)* (1. ed). Universidad Diego Portales.
- Brunner, J. J. (2015). Medio Siglo de Transformaciones de la Educación Superior Chilena: Un Estado del Arte. In A. Bernasconi (Ed.), *La educación superior de Chile: Transformación, desarrollo y crisis* (Primera edición). Centro de Estudios de Políticas y Prácticas en Educación, Pontificia Universidad Católica de Chile, Ediciones UC.
- Brunner, J. J., Labraña, J., Rodríguez-Ponce, E., & Ganga, F. (2021). "Variedades de capitalismo académico: Un marco conceptual de análisis." *Education Policy Analysis Archives*, 29(January-July), 35. <https://doi.org/10.14507/epaa.29.6245>.
- Carcović, A. (1971). *Ensayo sobre la Enseñanza Normal Fiscal. Realidad y perspectivas*. CPEIP.
- Cavallo, A., Salazar, M., Sepúlveda, O. (2008) *Historia oculta del régimen militar. Memoria de una época 1973-1988*. Uqbar Editores.
- Cox, C. (1984). "Continuity, Conflict and Change in State Education in Chile: a Study of the Pedagogic Projects of the Christian Democrat and the Popular

- Unity Governments.” Ph.D. Thesis, University of London, 1984. Published in: Collected Original Resources in Education, CORE, Vol.10, 2, 1986. Oxford: Microfiche in folder. Carfax Pub. Co.
- Cox, C. (1988) *Autoritarismo, mercados y conocimiento: evolución de las políticas de educación superior en Chile en los 80*. Centro de Investigación y Desarrollo de la Educación (CIDE).
- Cox, C. & Gysling, J. (1990). *La Formación del Profesorado en Chile 1842–1987*. CIDE.
- Cox, C. (1996). “Higher education policies in Chile in the 90s.” *Higher Education Policy*, 9(1), 29–43. [https://doi.org/10.1016/S0952-8733\(96\)90036-7](https://doi.org/10.1016/S0952-8733(96)90036-7).
- Cox, C. (2007). “Niveles del sistema escolar y formación de profesores: Fallas estructurales e implicancias de la inacción.” In J. J. Brunner & C. Peña (Eds.), *La reforma al sistema escolar: Aportes para el debate*. Universidad Diego Portales.
- Cox, C. (2016). “Teacher Education in Chile: Trends in Social and Policy Pressures for Change and Evolution of its Organizational and Knowledge Bases.” In B. Moon (Ed.), *Do Universities Have a Role in the Education and Training of Teachers? An International Analysis of Policy and Practice* (pp. 187–213). Cambridge Univ Press.
- Courard, H. (1992) “Los Centros de Formación Técnica.” In J.J. Brunner, C. Cox, and H. Courard (Eds.), *Estado, mercado y conocimiento: políticas y resultados en la Educación Superior Chilena 1960-1990* FLACSO.
- Gysling, J. (1988). *Antecedentes sobre la política de formación de profesores del gobierno militar*. CIDE, Documento de Discusión No. 4.
- Gysling, J., Cox, C. (1990) *La diferenciación institucional de la formación de profesores: elementos para el análisis*. Documento de Discusión N° 8. CIDE.
- Darling-Hammond, L., & Bransford, J. (2005). *Preparing Teachers for a Changing World: What Teachers Should Learn and Be Able To Do*. Wiley.
- Hargreaves, A., & Fullan, M. (2012). *Professional Capital: Transforming Teaching in Every School* (Unabridged). Blackstone Audio, Inc.
- Huneeus, C. (2016). *El regimen de pinochet*. Penguin Random House Grupo Editorial, S.A.
- Krebs, R. (1992). “Reseña histórica de la Facultad de Educación.” *Anales de la Facultad de Educación* 13(50). Años Facultad de Educación. Pasado, Presente, Futuro. Pontificia Universidad Católica de Chile
- Labarca, A. (1939). *Historia de la Enseñanza en Chile*. Editorial Universitaria.
- Lagos, A. (1996) *Neo-liberales, nacionalistas y estatistas: Derecha política y hegemonía en el proyecto educacional del autoritarismo (1979-1988)* [tesis

- para optar al grado de Licenciado en Historia, Pontificia Universidad Católica de Chile]. <http://www.memoriachilena.gob.cl/archivos2/pdfs/MC0066056.pdf>
- Ley Orgánica Constitucional de Enseñanza (LOCE), (1990).
- Ley General de Educación, Pub. L. No. 18.962 (2009).
- Magendzo, S. and Gazmuri, C. (1981). *El control autoritario expresado en las Circulares del Ministerio de Educación [documento de trabajo]*. Programa Interdisciplinario de Investigaciones en Educación, PIIE.
- OECD. (2004). *Revisión de Políticas Nacionales de Educación: Chile*. OECD. <https://doi.org/10.1787/9789264021020-es>.
- Page, S. E. (2006). "Path Dependence." *Quarterly Journal of Political Science*, 1(1), 87–115. <https://doi.org/10.1561/100.00000006>.
- Pérez, C. (2017). *Escuelas normales en Chile: una mirada a sus últimos intentos de modernización y a su proceso de cierre (1961-1974)*. Colecciones Digitales, Subdirección de Investigación, DIBAM. <http://www.museodelaeducacion.cl/648/w3-article-79564.html>.
- Pérez Navarro, C. (2017). El proyecto de Escuela Única de Pedagogía: Demandas y propuestas en torno a la formación unificada de profesores en Chile, 1928-1990. *Revista Mexicana de Historia de La Educación*, 5(9), 75–93. <https://doi.org/10.29351/rmhe.v5i9.94>
- Perl, M. (2010). Uniformidad, Centralismo y Calidad: El Instituto Pedagógico y las Provincias. *Revista Pensamiento Educativo*, 46–47, 171–185.
- Pierson, P. (2000). Increasing Returns, Path Dependence, and the Study of Politics. *American Political Science Review*, 94(2), 251–267. <https://doi.org/10.2307/2586011>.
- Placier, P. L., Letseka, M., Seroto, J., Loh, J., Montecinos, C., Vásquez, N., & Tirri, K. (2016). "The History of Initial Teacher Preparation in International Contexts." In J. Loughran & M. L. Hamilton (Eds.), *International Handbook of Teacher Education* (pp. 23–68). Springer Singapore. https://doi.org/10.1007/978-981-10-0366-0_2.
- Shulman, L. (2004). *The Wisdom of Practice: Essays on Teaching, Learning, and Learning to Teach*. Jossey-Bass.
- Superintendencia de Educación Pública, Sección Estadística (1971) *Matrícula Año 1971* (Mayo). Santiago.
- TIMSS (1999). *International Mathematics Report*. IEA. <https://www.iea.nl/publications/study-reports/international-reports-iea-studies/timss-1999-international-mathematics>.

TIMSS (1999). *International Science Report*. IEA. <https://www.iea.nl/publications/study-reports/international-reports-iea-studies/timss-1999-international-science>

Tatto, M. T., Dumais, J., Schwille, J., Senk, S. L., Ingvarson, L., Rowley, G., Peck, R., Bankov, K., Rodriguez, M., Reckase, M., & International Association for the Evaluation of Educational Achievement (Eds.). (2012). *Policy, Practice, And Readiness to Teach Primary and Secondary Mathematics In 17 Countries: Findings from the IEA Teacher Education and Development Study in Mathematics (TEDS-M)*. IEA.

Valdés, J.G. (1989). *La escuela de Chicago: Operación Chile*. Grupo Editorial Zeta.

World Bank (2001). *Performance Audit Report Chile*. Primary Education Improvement Project (Loan 3410-CH). The World Bank.