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ABSTRACT

Chapter 1 sets forth some of the salient geographic, economic, political, social, and historical factors of the setting in which the educational system functions. Since present-day problems in education continue to reflect the unsolved problems of the past, chapter 2 discusses some of the major historical landmarks. The educational system is divided into four distinct levels: preschool, elementary, secondary, and higher education with each level embracing schools of different types to satisfy specific characteristics and needs of the school population. Chapters 3 through 8 discuss each level with regards to: administration, organization, enrollment, finance, schedules, courses of study, admissions, grading and testing, teacher qualifications, and criticisms and problems. Chapter 9 concerns Chile's teachers --their preparation, their working conditions, and their problems. Finally, numerous government, quasi-government, and private agencies sponsor educational and related services. Chapter 10 and 11 briefly describe some of the major programs: adult education, social and economic student assistance; and, the nature of the financial and technical assistance received from the United States, agencies of the United Nations, various inter-American organizations, and other governments. (SBF)

CHILE

Education and Social Change

Highlights

- Chile's tremendous length (about 2,600 miles) and its extreme narrowness (221 miles at the widest point) provide the setting for a variety of climates and economic activities and explain the need to adapt education to local and regional requirements.
- Since colonial times Chile's development has been hampered by the isolation imposed by geographical factors—deserts to the north, mountains to the east, polar regions to the south, and the vast ocean to the west.
- Minerals account for nearly 90 percent of Chile's exports; of these the most important is copper, while nitrates rank second. The need to diversify the economy is urgent.
- Chile is noted for its political stability and its dedication to the democratic processes despite serious economic and social problems. The strength of democratic institutions in Chile provides a favorable climate for the growth of education.
- The Government of Chile is highly centralized; the control of the educational system by a Ministry of Education reflects the extreme centralization of all Government services.
- By establishing the University of Chile in 1842 with broad authority over all levels of schools, Chile became the first Latin American country to formulate an educational system.
- Outstanding educational developments of the 20th century include a law of compulsory elementary education passed in 1920, the impetus given vocational education by growing industrialization, and the democratization of secondary and higher education.
- Chile's educational progress is reflected in a literacy rate of about 80 percent, one of the highest for all Latin America; in the average number of school years completed (4.4 years), one of the highest averages for all Latin America; and in a large increase in secondary and university enrollment.
- The most impressive recent innovations in the educational system have occurred at the university level. Of these, a system of university regional colleges similar to our junior colleges has attracted most attention.
- Chile's whole educational system is still characterized by quantitative and qualitative deficits. A Commission for the Integral Planning of Chilean Education was established in 1962 to make a comprehensive study and to propose reforms that would attune education to the economic and social needs of a developing nation and to the long-range plans of economic development already formulated.
- Throughout its history, Chilean education has reflected the influences of Spain, France, Germany, and the United States, which has contributed substantial assistance since World War II. Although receptive to ideas from numerous sources, Chile still seeks a rationale for its educational system based on its own needs and realities.

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Education and Social Change in CHILE

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION

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CONTENTS

Tables

Figures

Foreword

THIS STUDY of education in a changing nation is another in a series of Office of Education publications on education in foreign countries. A 1945 field study bulletin by Cameron D. Ebaugh was followed in 1964 by a short bulletin, *Education in Chile*, by Adela R. Freeburger and Charles C. Hauch, which presented the salient features of the Chilean educational system in abbreviated form.

The present bulletin, a field study on recent Chilean educational developments, seeks to interpret them against a broad background of social and economic change. It is based on data gathered by the writer on two visits to Chile: one visit in 1960 by invitation of the Fulbright Commission to give a series of lectures in Chilean educational institutions, and the other visit in 1963 under the auspices of the Office of Education expressly to gather the data.

Educational developments in Chile merit thoughtful consideration for many reasons. Chile is one of the most advanced countries of Latin America and its educational system has been a prominent factor contributing to the country's advancement. Chile is a developing country which has already formulated long-range goals of economic development and which strives for a close integration of economic and educational planning. In recent years Chile has been the recipient of extensive educational assistance from public and private sources in the United States, thereby forging close educational ties between the two countries.

The writer and the Office of Education are grateful to the many Chilean school officials and teachers and the U.S. Embassy personnel who furnished valuable data. The writer is particularly indebted to Rigoberto Díaz, formerly Executive Secretary of the Fulbright Commission in Santiago; and to Irma Salas, Director of the Institute of Education, University of Chile.

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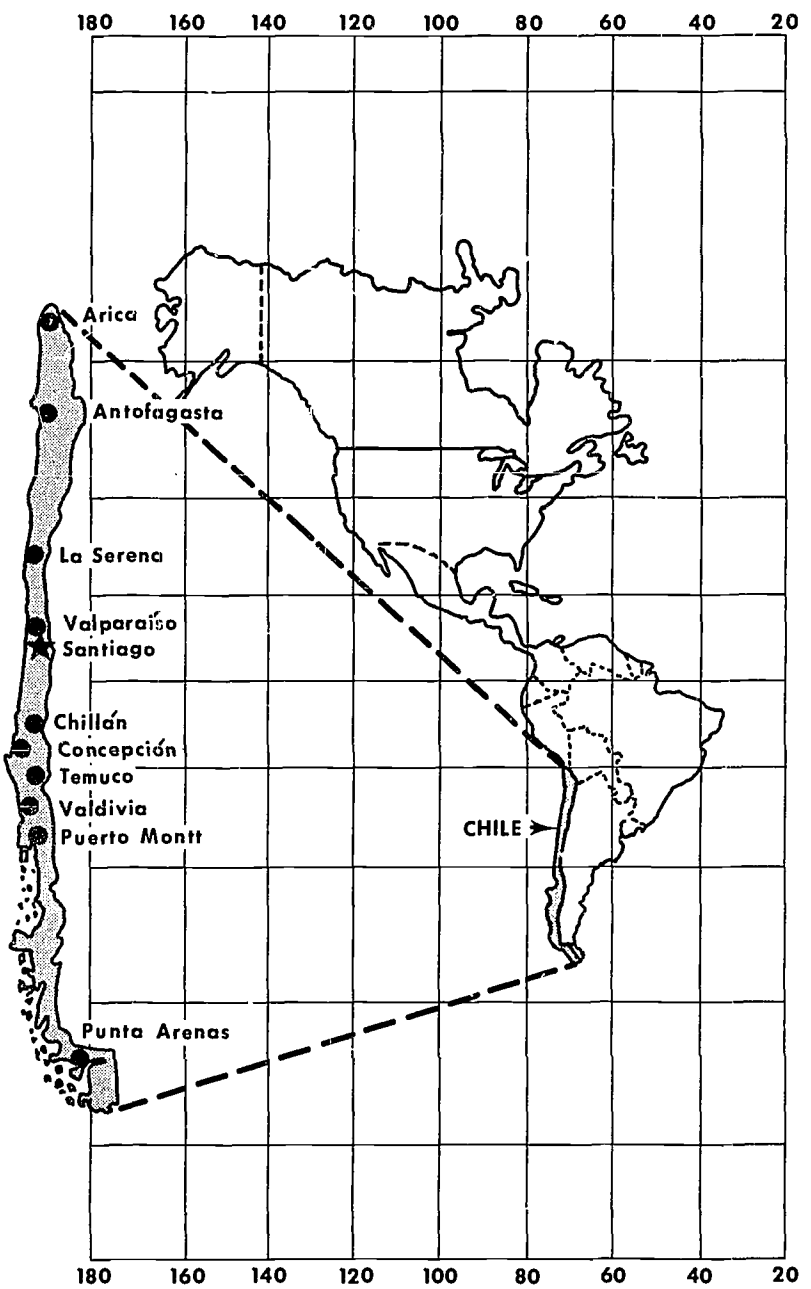
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Santiago
Chillán
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Puerto Montt
CHILE
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180
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1. The Physical and Social Setting

An educational system never operates in a vacuum. Schools are social institutions maintained by a society and therefore they reflect the beliefs, values, hopes, and ideals of the society that maintains them. To understand a country's educational system, one must understand the country that nurtures it. This is particularly true of a developing country like Chile, where the underlying thesis of the educational reformers is that the schools should adapt themselves to the nation's current realities and changing needs and shed the outworn traditions of its past.

What are the realities of Chile? This chapter will attempt to set forth some of the salient geographic, economic, political, social, and historical factors of the setting in which the educational system functions.

Geography

The Land.—Geographically, Chile is a unique country. Like a narrow band, it stretches some 2,600 miles in a north-south direction from 17° south latitude to Cape Horn. Its length and its narrowness (221 miles at the widest point) provide a variety of climates, from the parched deserts of the North to the ever-present snows and glaciers of the stormy southern Andes. The climatic extremes of the North and the South have caused a concentration of agriculture and commerce in the great Central Valley. Chile has island possessions, the most important of which are Juan Fernández Island ("Robinson Crusoe" Island) and Easter Island, lying 2,600 miles west of Valparaíso. Chile also claims portions of Antarctica, where weather stations and scientific bases have been established.

Possibly a few comparisons can provide a better picture of the length of Chile. If it were superimposed diagonally on a map of the United States, Chile would stretch from New York to San Francisco. On a map of North America, it would reach from the middle of Ontario to the southern border of Mexico. On a map of Europe, it would extend from the middle of Norway past the Straits of Gibraltar into Northern Africa. Chile's unusual length is emphasized here as a background for understanding not only the variety of economic

activities which that length produces, but also the country's current efforts to adapt education to local and regional needs.

In size, Chile is slightly larger than the State of Texas. In comparison with countries of Europe, Chile is large. Compared with other South American nations, it is small. Only Ecuador, Paraguay, and Uruguay are smaller. But size of an area is of less importance than habitability. Over 70 percent of Chile's terrain is unsuited for human habitation because of deserts, mountains, swamps, and other handicaps.

The outstanding fact about Chile's location is the isolation imposed by geographical factors. To the north are the desert areas; to the east, the Andes, which reach their highest elevations on the border between Chile and Argentina; to the south, the ice of the polar region; and to the west, the vast reaches of the Pacific. Chile's isolation in a remote part of the world has had a marked effect on immigration, trade, and the character and spirit of the people. One should never equate geographical isolation with cultural isolation, however, since Chile has maintained close contact with world culture despite its geographical handicaps.

The major physical features of the country are the Andes Mountains, which form the eastern border, and the coastal range. Between these two mountain ranges lie a series of basins. Only 20 percent of the country's surface is level land; the rest is mountains. These mountains offer the advantages of a water reserve for regions of little moisture, hydroelectric power potential, and a source of minerals. On the other hand, because of their difficult terrain and low temperatures, they serve as impediments to transportation and communication. Inaccessibility has been a prime reason for the lack of schools in many regions.

With regard to water, Chile is a country of contrasts. In the desert North the battle for water is relentless as rivers from melting Andean snows struggle futilely against the thirsty desert to reach the ocean before drying up. In the south the battle is against water—draining swamps and preventing dangerous floods from the rivers and the sea. Except in the North, Chile's many rivers provide a substantial supply of water for industry, irrigation, household needs, and power. The numerous lakes of southern Chile added to the rivers, lakes, and coastline of more than 2,600 miles from Arica to Cape Horn give the impression that Chile is richly endowed with water, one of mankind's most important natural resources.

In general, Chile can be divided into five major regions from north to south as follows:

1. *Northern.*—The northern desert provinces of Tarapacá and Antofagasta, containing about 25 percent of the country's land area and less than 5

percent of the population. Here are the nitrate deposits and large copper mines.

2. *North Central.*—Semidesert broken by fertile river valleys. Iron ore is found in this region.
3. *Central and South Central.*—About 20 percent of the land area, including the fertile, highly cultivated Central Valley. About 78 percent of the country's people live in this region, which contains the country's three largest cities: Santiago, Valparaíso, and Concepción.
4. *Lake.*—From Concepción to Puerto Montt. A region of forests, lakes, and rivers, with 6.5 percent of Chile's land and 8.4 percent of its people.
5. *Southern.*—From Puerto Montt to Cape Horn, a region stretching for 1,000 miles, composed of lakes, fjords, mountains, glaciers, islands, and channels. Rainfall is abundant; climate, cold and stormy. This region accounts for one-third of Chile's area and only 3 percent of its population. A subdivision is Atlantic Chile, lying along the Straits of Magellan east of the Andes and noted for sheep raising, coal mining, and the only oil wells in Chile.

The People.—The latest census, taken in 1960, showed a population of 7,340,000, an increase of 1,400,000 over the 1952 population. This increase shows a growth rate of 2.5 percent annually. Compared with the growth rates of European countries or with those of Anglo-America, Chile's rate is extremely high, although it is exceeded by that of many other Latin American countries. Within this century the population of Chile has more than doubled. Within 20 years, given the present rate of expansion, it is expected to double again. Chile, like many other countries of the world, is experiencing what has been termed a "population explosion." Longevity is now estimated at 60 years, whereas in 1930 it was only 40.

Chile has less racial diversity than most other Latin American countries. The population of pure Indian stock and those who speak Araucanian as well as Spanish is estimated at about 300,000. The predominant element is the *mestizo* (mixture of Spanish and Indian). Population increase by immigration has been relatively small. German immigrants have contributed significantly to the development of the southern regions of Valdivia and Puerto Montt. Italian, Swiss, and French farmers have also settled in the southern region. Though the total immigration of Chile has been small, these immigrants have had an influence greater than their numbers would indicate.

Chile's population is unevenly distributed geographically. The vast majority live in the Central Valley. Metropolitan Santiago alone has a population in excess of 2 million. Urban population now represents two-thirds of the total, and the trend toward urbanization is accelerating. Between the census of 1952 and that of 1960, 65 percent of the population increase took place in the three provinces of Concepción,

Santiago, and Valparaíso. The continued rapid increase of population of larger cities appears inevitable.

The age distribution of the population is of particular concern to educational planners. Over 38 percent of the population is less than 14 years old. Providing schools, teachers, and later jobs for this large dependent group is a challenge of gigantic proportions.

The Economy

In 1960 the economically active population of Chile was distributed as follows:[1]

Total	2,659,000
Services	1,260,400
Agriculture, forestry, and fishing	702,000
Industry	483,900
Construction	114,300
Mining	98,400

Although industrialization is growing, agriculture and mining remain the chief bases of economy. Agricultural production is centered in the Central Valley, whose principal crops are grains and fruits. Large quantities of wine are produced for local consumption and export. Cattle and sheep are raised, and wool is exported. The failure of agricultural production to increase at a satisfactory rate, however, has forced Chile to spend much of its foreign exchange on importing food which might have been produced at home.[2] The stagnation of agriculture is one of Chile's most acute problems, and land reform is an urgent necessity.

The forest region of the south provides the basis for a developing pulp and paper industry, while the lengthy coastline affords the potential for a thriving fishing industry.

Minerals account for almost 90 percent of Chile's exports. Of these, the most important is copper, while nitrates and iodine (a by-product of nitrate production) rank second. The availability of coal, iron, and oil provides the necessary basis for industrialization.

The United States is Chile's main customer. About 40 percent of its exports go to the United States, from which it obtains 45 percent of its imports.

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[1] Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 12. (For complete bibliographical details for this citation and all subsequent ones in the present publication, see the bibliography.)

[2] Jorge Ahumada C. *En Vez de la Miseria.* p. 67.

Manufacturing is concentrated around the three largest cities of Concepción, Santiago, and Valparaíso, whose principal products, processed mainly for the local market, include foods, tobacco, beverages, textiles, metals, and chemicals. Latin America's second largest steel mill is located near Concepcion.

Since trade is so vital to Chile's economy, the need for adequate transportation routes is obvious. Although difficult terrain has been a serious obstacle for the building of railroads and roads, rail lines stretch from the northern desert to Puerto Montt and also connect Chile, with all of its neighboring nations. The Pan-American Highway extends as far south as Santiago, and maritime routes connect various points along Chile's coast. Airlines connect the major cities of Chile and provide rapid service to points in South America, North America, and Europe. A pressing need exists to extend and modernize transportation services. Particularly acute is the need for more transverse roads and railroads connecting the interior with the coast.

Economic development is the responsibility of the *Corporación de Fomento de la Producción* (Corporation for the Development of Production) created in 1939 for the purpose of "formulating a plan of development of national production aimed at raising the level of living of the population." This State corporation has been active in the development of agriculture, commerce, electricity, fishing, oil, steel, and other areas of economic activity. For the decade 1961 through 1970 it has postulated goals and priorities in economic development aimed at correcting two major faults of the economy: its slow growth and its instability.[3] Also apparent is the need to diversify the economy in order to relieve the excessive dependence on two main exports. Should there be a drastic decline in their demand and prices, the loss of revenue would seriously hamper the Government's stability to support education and other public services.

Government

Chile is a unitary republic with three branches: executive, legislative, judicial. The President, who is elected by direct vote for a 6-year term and cannot succeed himself, has the power to designate the chief executive officers in the 25 provinces. The legislature is bicameral, with members of the Chamber of Deputies serving for 4 years, and members of the Senate for 8. The Chamber of Deputies has 147 members; the Senate has 45.

[3] Corporación de Fomento de la Producción. *Programa Nacional de Desarrollo Económico 1961–1970.*

For internal administration, the country is divided into provinces, the provinces into departments, the departments into subdelegations, and the subdelegations into districts. The franchise is restricted to Chileans over the age of 21. Church and State are separate. Roman Catholicism is the dominant religion, but it is not supported by the Government, which protects the free exercise of religious beliefs. The freedom of the press and of speech is also guaranteed.

Chile's comprehensive plan of social insurance is one of the most advanced in all Latin America. Its benefits include family allowances; sickness and maternity payments; pensions for widows, orphans, and the aged; and medical care. Not all workers are covered, and white-collar workers tend to receive more benefits than manual workers.

The Government participates actively in the economy. It owns most of the railroads and operates post offices, a national airline, and a telegraph system. It controls the nitrate and iodine industries. Through the *Corporación de Fomento*, already mentioned, it plays a predominant role in the development of national industries.

Unlike many other Latin American countries where revolutions have been frequent, Chile presents an image of a people with deep respect for established government, a healthy tolerance for differing points of view, and a sincere dedication to the democratic processes. Despite economic and social problems, the political structure remains remarkably stable, a favorable factor for the development of education.

The centralized character of the Chilean Government helps to explain the extreme centralism of the educational system. Proposals for decentralization of educational administration have met with little success and appear incongruous with the centralization of other Government services.

Historical Development

When the Spanish arrived in Chile in 1535, they found the northern half of the country dominated by the Incas. The conquest was carried out by Pedro de Valdivia in 1540, but it did not include the south, where neither the Incas nor the Spaniards were able to conquer the Araucanians. Chile was governed as an outpost of Peru during colonial times and proved to be a costly colony to maintain. Long distances, difficult terrain, earthquakes, floods, Indian attacks, and the lack of precious metals made Chile less than a prize in the eyes of the Spanish Crown, but many will contend that in the overcoming of

these obstacles certain character traits emerged which are still evident in the populace today.

Independence was achieved in the early part of the 19th century, followed by a period of political turmoil and the adoption of an autocratic republic in which the president exercised broad powers. In the War of the Pacific (1879–83) Chile defeated Peru and Bolivia, acquired two rich nitrate provinces, and began a profitable exploitation of nitrates.

The 20th century has been one of social and economic change. The decline of the nitrate industry in the 1920's and the later world-wide depression brought Chile to the brink of economic chaos. A new Constitution in 1925 provided for a strong executive, a labor code, social security, and separation of Church and State. The election of a candidate from the left-wing Popular Front in 1938 brought increased Government intervention in the economy as evidenced by the creation of the *Corporacion de Fomento* in 1939, which was accompanied by a new stimulus to technical and industrial education. Succeeding administrations have made industrial development and its attending problems a primary concern.

Major Social and Economic Problems

A survey of the current scene in Chile reveals social and economic problems of great magnitude which have pointed relevance for education. Here are but a few of them:

- **Inadequate annual increase in per capita gross national product (*producto geográfico bruto*).**
  (From 1955 to 1960 the annual per capita gross national product declined from 663 to 624 *escudos*.) [4]
- **Low level of income, productivity, and skill.**
  (In 1952, 70 percent of the labor force was unskilled.) [5]
- **Unstable economy.**
  (Excessive dependence on a limited number of exports, chiefly copper, makes the economy vulnerable to world market fluctuations, creating an instability which is reflected in inflation. In terms of U.S. dollars, the *escudo* was worth less than one-third as much in 1963 as in 1960. *Time* magazine [6] reported that the cost of living in Chile had risen 50 percent between April 1963 and April 1964.)

[4] Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica que Afecta la Educación.* p. 2. (In 1960 the *escudo* was valued at slightly less than $1 U.S.)
[5] Ibid.
[6] April 17, 1964, p. 50.

- **Low-level agricultural production.**
  (One economist[7] contends that agricultural production was less per capita in 1960 than 25 years earlier, and that the number of cultivatable hectares per person had also declined.)
- **Uneven distribution of income.**
  (Not only is per capita income low (approximately $325 annually), but there are marked differences in its distribution. A 1954 study showed that fewer than 3 percent of the people in the highest income brackets received 25 percent of the total personal income of the country, while 55 percent at the other end of the scale received less than 16 percent of that total.[8])
- **Malnutrition and disease.**
  (The poverty of the masses makes it impossible for them to buy the food that would constitute a balanced diet. Official estimates are that the diet of about 70 percent of the primary school children is unbalanced and inadequate.[9] The infant death rate continues high, and Chile heads the list of Latin American countries in the death rate from tuberculosis. The health situation is aggravated by a shortage of nurses, a recent report showing only slightly more than 1,500 graduate nurses employed in Chile, or about one-third as many nurses as doctors.[10] By contrast, in many other countries of the world nurses outnumber doctors. The nurse shortage may be explained partially by the fact that nurses get low pay, but a more important reason for this shortage is the persistence of the colonial tradition that places nursing in the category of menial tasks performed by domestic servants rather than in the category of status positions.)
- **Shortage of dwellings.**
  (According to one source,[11] 86 percent of working-class families live in one room. The 1960 census showed an average of 5.4 inhabitants per family dwelling.[12])
- **Urban migration and slums.**
  (Large number of the unskilled and the uneducated have drifted into the cities. Unprepared for the demands of modern city life, they have settled in slum areas called *poblaciones callampas*. Such areas are reminders that Chile's urbanization is proceeding at a faster rate than its industrialization.)

All of Chile's acute social and economic problems are interrelated, and all are closely related to the educational system. Education is often considered the key to the long-range solution of these problems, which represent a formidable challenge to the schools at all levels.

[7] Jorge Ahumada C. op. cit., p. 57.
[8] United Nations Economic and Social Council. *Provisional Report of the Conference on Education and Economic and Social Development.* p. 234.
[9] Ministry of Public Health and Ministry of Education. p. 11.
[10] Rudolph C. Blitz. *Some Observations on the Chilean Educational System and Its Relation to Economic Growth.* p. 17.
[11] *The South American Handbook 1960.* p. 370.
[12] Servicio Nacional de Salud. p. 28.

In a sense, the persistence of these problems might be considered a failure of the schools. It is probably more nearly correct to say that these problems indicate the failure of a whole society to meet its challenge, for the schools are but one institution and their progress will continue to be adversely affected by the very deficiencies which they aim to correct. A dominant theme constantly expressed by official educational planners is the need to integrate education with the social and economic needs of the nation.[13] This chapter has tried to point out what some of them are.

[13] Ministerio de Educación Pública, *Bases Generales para el Planemiento de la Educación Chilena*. p. 18–26.

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2. Important Educational Landmarks

EVERY EDUCATIONAL SYSTEM is a product of its past, and only through a study of its antecedents do its present characteristics become understandable. How else can one explain the retarded development of technical and vocational education unless one understands the aversion of the Spanish colonials to work with their hands? Similarly, the aristocratic orientation of the universities and secondary schools and the relatively low status accorded elementary education are rooted deep in tradition. Present-day problems in education, as in other areas, continue to reflect the unsolved problems of the past. To expect rapid changes in education is to ignore or minimize the force of tradition. The development of education in Chile has followed a fluctuating course, but its overall movement has been forward. This chapter will set forth some major educational landmarks.

The Preconquest Era

The Araucanian or Mapuche Indians, who populated the south of Chile, had resisted conquest by the Incas and by the Spanish. It was not until the 1880's that they were finally brought under control after more than 300 years of intermittent warfare with white settlers. One wonders why the Araucanians were able to fight and resist conquest when other Indian civilizations had fallen to the Spanish. The Araucanians, nomadic and warlike, had no established schools like the Aztecs in Mexico,[1] but through family and tribal units the adolescent boys were taught public speaking, athletic games to develop robust bodies, and the handling of weapons.[2] Their enemies over a period of three centuries could readily testify to the success of their educational system in producing competent young warriors.

[1] Amanda Labarca H. *Historia de la Enseñanza en Chile.* p. 5.
[2] Fco. Frias Valenzuela. *Manual de Historia de Chile.* p. 74.

The Colonial Period

The development of education in colonial times was a slow process. The *conquistadores*, for the most part illiterate and uncultured, could not have been expected to be enthusiastic about education. Of the 150 men who accompanied Pedro de Valdivia in his campaign of conquest in 1540, only 89 could sign their names and only 1 had had any systematic studies.[3] Not only was there a lag in the development of schools, but the whole colony developed slowly in the face of countless obstacles, which prompted the authorities to think at one time about abandoning Chile entirely.[4] Chile had the reputation of being the poorest of the Spanish colonies despite the fertility of its soil and its climatic advantages.[5]

The society established in colonial Chile was essentially feudal. Land was parceled out by the Crown in huge tracts to Spanish soldiers, leaving Indians, Negroes, and *mestizos* to form the labor force for the farms, the mines, and the cities. Positions of power and influence were reserved for the European-born, and only their sons received what might be called systematic instruction.[6]

Most of the formal instruction in colonial Chile was under religious auspices. Like Spain, the colonies lacked a system of mass education. The monarchy never considered the education of the masses as an obligation of the State, but a work of charity to be performed by religious orders.[7] Although there was no sharp distinction in function and instruction in colonial educational establishments, Labarca,[8] noted authority on the history of Chilean education, singles out three types: *escuelas de primeras letras* (literally, "schools of first letters"), Latin grammar schools, and schools of higher education.

The *escuelas de primeras letras*, usually established by convents or the town council, offered instruction in Christian doctrine, reading, writing, and the most simple operations of arithmetic. Instruction did not reach the children of peons, slaves, or servants.

The Latin grammar schools initiated students into the rudiments of Latin. In theory, instruction was to be given for 3 years, but pupils usually remained longer.

Higher education was given in the seminaries or in the papal universities, where students studied liberal arts and the rudiments of

[3] Amanda Labarca H. op. cit., p .7.
[4] Ibid., p. 12.
[5] Fco. Frias Valenzuela. op. cit., p. 178.
[6] Cameron D. Ebaugh. *Education in Chile.* p. 4.
[7] Labarca. op. cit., p. 28.
[8] Ibid., p. 28–29.

philosophy for 2 or 3 years. Their principal objective was not to educate citizens or scholars, but future priests.

Methods of instruction consisted of rote memorization. The few textbooks available had to meet approval of both civil and religious authorities.[9] Spanish grammar was not taught until the end of the colonial period. Discipline was based on the concept of absolute and strict obedience, and offenders were punished harshly and publicly.

Three events of great educational import occured during the 18th century: the establishment of the *Real Universidad de San Felipe*, the expulsion of the Jesuits, and the founding of the *Academia de San Luis*.[10]

The founding of the *Real Universidad de San Felipe* in 1738 marked the beginning of higher education under the sponsorship of the State. Previously all higher education had been restricted to religious institutions, where the curriculum prepared students for entrance into religious orders. The *Universidad de San Felipe* offered a more extensive curriculum with chairs in the arts, church law, jurisprudence, mathematics, medicine,[11] and philosophy. Although the scholastic atmosphere and the level of instruction did not differ much from those of ecclesiastical institutions, the important innovation was that lay scholars were included on the teaching staff.[12] The *Universidad de San Felipe* produced many doctors of theology and jurisprudence but not a single one in mathematics in its whole existence and only five in medicine.[13]

The expulsion of Jesuits from Spanish colonies in 1767 marked an educational crisis for Chile. They were considered the outstanding teachers of youth, and their expulsion forced local authorities, particularly the *cabildos* (town councils), to concern themselves more with education. The Jesuits proved hard to replace in the many schools of the capital and the provinces, with the net result that education suffered a setback.[14]

The third event of the 18th century of singular importance was the establishment of the secondary-level of *Academia de San Luis* and the emergence of its founder, Don Manuel de Salas, as one of the great educational leaders of the colonial period. His ideas are still looked to today as educational reformers seek to effect a closer tie between the schools and the social and economic needs. Don Manuel de Salas advocated a type of education that would be both intellectual and practical and thereby serve as a basis to develop agriculture, commerce,

[9] Ibid., p. 33.
[10] Ibid., p. 41.
[11] Ibid., p. 43.
[12] Ibid., p. 44.
[13] Ibid., p. 47–48.
[14] Ibid., p. 52.

industry, and mining.[15] The curriculum of his *Academia* included drawing, geometry, and physical and natural sciences—all taught in the vernacular. The *Academia* functioned from 1797 until it became a part of the *Instituto Nacional* in 1813. Labarca [16] sums up its contribution as follows:

> The *Academia de San Luis*, with its library, its instruments, its microscope, its laboratory of mineralogy, and its chair of drawing is the only example that we know of in the colony of a school designed to serve the needs of the working man, industry, commerce, and the production of the country. It preceded by almost half a century similar institutions in America.

The Republic: 1810–50

Colonial education, which was abstract, scholastic, intellectual, and oriented to the needs of the aristocratic class in a feudal society, left Chile not only ill-prepared for the development of a sound educational system but ill-prepared for the exigencies of self-government.

Early Educational Leaders.—Chile was not without some effective educational leaders when independence was declared in 1810. Three of these deserve special mention: Don Juan Egaña, Camilo Henríquez, and Manuel de Salas, whose earlier contributions have been discussed above. These men proposed the foundations of an educational system to serve the needs of the State. Their ideas were incorporated in the plan for the Constitution published in 1813 which declared: "Governments should provide for public education as one of the prime conditions of the social contract." Article 215 of the same document called for the establishment of a great Institute for arts, military instruction, religion, sciences, and trades.

Instituto Nacional.—An *Instituto Nacional* was established in 1813 with multiple objectives of providing university, secondary, elementary, technical, military, physical, normal-school, and ecclesiastic education.[17] The plan was visionary and grandiose, a noble statement of hopes that bore little relationship to realities.[18] The next year when Spanish rule returned to Chile, the *Instituto Nacional* was closed, not to be reopened until 1819, under the re-established republican rule. The *Instituto Nacional* gradually eclipsed the *Universidad de San Felipe*, the University retaining only the authority to confer bachelor's degrees on the basis of certification of the *Instituto Nacional*.[19] In

[15] Ibid., p. 54–55.
[16] Ibid., p. 58.
[17] Fernando Campos Harriet. *Chile: Desarrollo Educational 1810–1860*. p. 13–14.
[18] Labarca, op. cit., p. 78.
[19] Ebaugh, op. cit., p. 6.

1842 when the University of Chile was founded, the *Universidad de San Felipe* ceased operation. Five years later the University of Chile took over from the *Instituto Nacional* all university courses, leaving the latter as a secondary school for boys.[20]

The Constitution of 1833.—The Constitution of 1833 contained several provisions relating to education. It declared that education is a prime obligation of the State; it instructed Congress to formulate a general plan of national education; and it stated that there would be a superintendency of public education responsible for supervision and direction of national education under the authority of the Government. It also obligated municipalities to promote education and look after the schools and other establishments of instruction paid for by municipal funds. The real significance of the Constitution of 1833 lies in the introduction of the concept of education as a State obligation rather than an ecclesiastical monopoly.

The University of Chile.—The University of Chile was founded in 1842. It was to direct all national literary and scientific establishments and supervise other establishments of education. The University was in effect to be responsible for the superintendency of education, established by the 1833 Constitution, thereby achieving a degree of administrative coordination in the whole educational system. Chile thus was the first Latin American country to formulate a public educational system.[21] The law establishing the University did not mention teaching, so that in its first years the University, without the necessary teaching personnel, performed other academic and cultural functions.[22]

***Escuela Normal de Preceptores* (National Normal School).**—The year 1842 was also important for the establishment of the National Normal School for men with Sarmiento, the famous Argentine scholar, as its first director. (Previously, the Lancasterian system had been used and abandoned as a means of solving the teacher shortage.[23]) The curriculum consisted of reading and writing, the methods of mutual and simultaneous instruction, commercial arithmetic, descriptive geometry, lineal drawing, and general ideas of history (particularly the history of Chile). The course was to last 3 years. Twenty-eight boarding students, all from outside the capital, were to be selected for the first course, and they were to receive an annual gratuity for their maintenance and clothes. In return they would have to sign contracts to serve as teachers for 7 years in places designated by the Government.

[20] Ibid., p. 6.
[21] Ibid., p. 131.
[22] Ibid., p. 111.
[23] Fernando Campos Harriet. op. cit., p. 15. Developed in England by Joseph Lancaster (1778–1838) and based on the use of advanced pupils as monitors, the Lancasterian system made it possible for one teacher to direct the learning of a large number of pupils.

The curriculum of the National Normal was rather elementary and only one course was really on a professional level. Today the normal schools continue to be boarding schools for the most part, but their curriculum is of 6 years' duration, the first 4 being equivalent to secondary education.

Summary of Achievements at Midcentury.—At midcentury Chile could point to many achievements. The Constitution of 1833 had made clear that education was an obligation of the State. The University of Chile had been established in 1842 and charged with the authority to coordinate the whole educational system. A National Normal School had been established, and a renowned educator had been named as its first director. Enrollment was estimated at no more than 10,000 in elementary schools (only 1 percent of the population); and 2,000 in secondary schools (0.2 percent of the population).[24] These data were indicative of considerable unfinished business.

The Republic: 1850–1940

National Normal School for Women.—The efforts of Sarmiento in the development of normal education had impressed public opinion so favorably that a normal school for women was established in 1853. To meet the objections of conservatives, its operation was turned over to a religious order.[25] Like the normal school for men, it was a boarding school, with the students allowed an annual gratuity for food and clothes. The curriculum consisted of arithmetic, needlework and embroidery, reading and writing, religion and sacred history, and Spanish grammar. The average annual number of graduates in the first decade did not exceed six.[26]

Organic Law of 1860.—The Organic Law of 1860, which stimulated the development of education at all levels, made elementary education free. In every Department (administrative subdivision of the provinces) there was to be 1 school for boys and 1 for girls for every 2,000 inhabitants. Secondary schools were to be established in principal cities and capitals. Seasonal schools were to be maintained in rural areas, but this provision of the law was never carried out.

The curriculum prescribed for elementary schools included Christian doctrine, reading and writing, and rudiments of arithmetic; for the secondary schools arithmetic, geography, history, lineal drawing,

[24] Labarca. op. cit., p. 132.
[25] Ibid., p. 135.
[26] Ibid., p. 138.

the National Constitution, and Spanish grammar. For girls the last two courses were to be replaced by domestic science, embroidery, sewing, and the like.[27]

The new law also ordered the opening of further normal schools to insure qualified teachers. If such teachers were not available, it permitted applicants to be appointed on the basis of university examinations, secondary school certificates, and testimonials from two trustworthy persons as to good character and good habits.

To finance the schools, the Organic Law of 1860 provided that annual grants be made from the general income of the public treasury and that the municipalities also contribute. As a result, the schools run by the municipalities gradually disappeared, to be replaced by those of the State.[28]

Elementary school supervision was removed from the University of Chile and placed in charge of an *Inspector General* with *visitadores provinciales* (provincial visitors) as his advisers. The 1863 regulation completed the provisions of the law. This regulation specified the qualifications of the *Inspector General* and the *visitadores*, salaries and promotions of personnel, and other points which more clearly defined the structure of the teaching profession.

As a result of the Organic Law of 1860 secondary schools were created in cities where they were needed. The disproportion of male students grew less with the creation of more schools for girls.

The Organic Law of 1860 and its subsequent regulations distinctly advanced the extension of public education for the masses. A clear concept of the role of popular education in the development of the country had previously been lacking, as evidenced in the small number of State-maintained schools. The ruling classes, always acutely conscious of class differences, could not admit the need for common elementary schools. Their children attended the free courses offered by the *Instituto Nacional* or private schools. The children of peons and artisans attended the few public schools, which were in poor condition, since they were usually rented buildings chosen with little thought for their educational suitability.

Law of 1879.—The Law of 1879, which reorganized the University, conceded leadership in higher and secondary education to the University Council and obligated the *Facultad* (School) of Philosophy and Humanities to supervise and improve the programs of the *liceos* (secondary schools). The law contemplated the establishment of one *liceo* in each provincial capital and the possibility of establishing in-

[27] Ibid., p. 148.
[28] Ibid., p. 149.

stitutions or courses of a technical and practical nature. It also introduced an innovation accentuating the aristocratic character of secondary schools by permitting them to establish preparatory courses. This had the effect of separating the *liceos*, most of which were private, from the common elementary school. The Law of 1879, which remained in effect until 1927, fostered a growth of higher professional schools, converting them into what Labarca calls "the most complete of their kind in South America." [29]

Importation of German Teachers.—Throughout the 19th century the predominant foreign influence on education in Chile had been French. After the German victory in the Franco-Prussian War, the Chilean Government turned to Germany for assistance. The first contingent of German teachers reached Chile in 1885. They had been contracted for by José Abelardo Nuñez, distinguished educator, who had been commissioned by the Government to study elementary education at first hand in the United States and Europe. The normal schools in the capital, Concepción, Chillán, and La Serena were turned over completely to foreign teachers with the exception of classes in Spanish, civics, and later, history of the country and America.[30]

The importation of German professors brought both advantages and disadvantages. Steeped in the Herbartian pedagogy and the scientific psychology prevailing in Germany at that time, these German professors immediately set to work to cast the normal and elementary schools into the Herbartian mold. They imposed the Herbartian techniques of instruction based on five formal steps, emphasizing the importance of manual work, drawing, singing, and physical exercise. They enriched the content of the elementary program by giving more attention to nature study and written and oral practice of Spanish. All of these appear to have been distinct advances, but there were major shortcomings as well. A foreign spirit, alien to Chilean realities, was imposed on the schools, as evidenced in the rigid monarchical concept of discipline. By their aristocratic orientation, the German professors inspired even greater class cleavage in Chilean society and within the schools created inflexible barriers among pupils, teachers, and directors. The German legacy, both good and bad, has had continuing influence even to the present day.

Influence of José Abelardo Nuñez.—Along with the German influence other factors contributed to the development of education in the late 19th century. José Abelardo Nuñez, Inspector General of Public

[29] Ibid., p. 175.
[30] Ibid., p. 184.

Education from 1888 to 1897, was the principal moving force behind improvements in elementary education. Among his many achievements was that of promoting the *Congreso Pedagógico* (Pedagogical Congress) in 1889. At this meeting delegates deliberated over the following topics: manual work in the schools for both sexes, better methods of reading and writing, promoting more regular attendance, gymnastic and military exercises, music teaching, practical means of effecting compulsory attendance in primary schools, the teaching of hygiene, promoting the development of education in rural areas, night schools for adults, and improvement of the professional preparation of teachers graduated before 1885.

Contributions of Don Valentín Letelier.—While José Abelardo Nuñez was serving as the inspirational force in the development of elementary education, Don Valentín Letelier was performing a similar role in secondary education. His philosophy emanated from the positivism of Comte. In Chile he conceived of education as a social function as did John Dewey whom he preceded by several years, in the United States. He advocated the strengthening of the elementary school, a secondary curriculum organized on a concentric basis, and equal educational opportunities for both sexes. A philosopher whose ideas were far in advance of prevailing theory and practice, Valentín Letelier was influential in the reform of the secondary school curriculum and the establishment of the *Instituto Pedagógico* (Pedagogical Institute) for the preparation of secondary teachers.

The Founding of the Instituto Pedagóico.—In 1889 the *Instituto Pedagógico* with six professors from Germany in charge opened its doors. In the following year the *Consejo de Instrucción Pública* (the Council of Public Instruction) specified the following major fields of study: Spanish and Latin; French and Latin; English and German; history and geography; mathematics and physical and natural sciences. All students were to study philosophy, philosophy of science, pedagogical theory and practice, gymnastic theory and practice, and general principles of constitutional law. The course was to last 3 years, and 10 students were to be admitted to each of the subjects. Upon completing the course, students would be awarded the title of *profesores de estado* (State teachers). Through the *Instituto Pedagógico* new reforms of the secondary schools were carried out. The functions of the *Instituto* have expanded greatly. Today, as part of the University of Chile's *Facultad de Filosofía y Educación*, it continues its traditional role of providing teachers and leadership for Chile's secondary schools.

Reforms in Secondary Schools.—The 1893 reforms brought the secondary school more in line with the German *gymnasium* instead of the French *lycée*, which had served as the model since the beginning of the 19th century. Latin was replaced by two modern foreign languages: French and English or French and German. Singing, physical education, and drawing were added. The physical and natural sciences were increased. History of philosophy was added, and foreign languages were to be taught in a parallel fashion from the first to the sixth year. The secondary program, essentially humanistic and preparatory, had been designed by University specialists. The domination of the University over the secondary curriculum continues today in the face of mounting demands for liberalization.

The Status of Education in 1900.—The end of the 19th century found the educational system, in the words of Labarca,[31] *extranjerizado* (foreignized). The normal schools reflected German objectives. Discipline, methods, plans, and programs were German imitations. German influence had pervaded the secondary and technical schools as well. Swedish influence was evident in physical education, manual training, and domestic science. By 1900 a system of secondary schools had been extended to include both boys and girls, and a beginning had been made in technical education and adult education.

The educational system, though centralized and uniform, lacked internal unity. Elementary and technical schools, attended mainly by pupils from low economic groups, lacked articulation with the secondary schools and the University, attended by students from the upper classes.[32] The University exercised jurisdiction over the secondary schools. The Ministry of Public Instruction controlled the elementary schools while other ministries had charge of technical schools. Still lacking was a coordinated plan of education envisioned in the Constitution of 1833 with its provisions for a *Superintendencia de Instrucción Pública.* Today a national planning commission is still seeking a means for achieving organic unity within an imperfectly articulated structure.

Possibly the greatest defect in Chile's educational system has been not only its limited facilities but the small proportion of the country's population enrolled in schools. For example, the 1895 census showed a total population of 2,712,145, with 72 percent illiterate.[33] From a total population of slightly more than 3 million in 1900, Labarca re-

[31] Op. cit., p. 211.
[32] Ibid., p. 212.
[33] Fernando Campos Harriet. op. cit., p. 33.

ports only 187,087 students enrolled in schools, distributed as follows: [34]

Elementary	170,909	Normal schools	760
Secondary	11,719	Seminaries	591
Technical schools and institutes	1,856	Universities	1,106

One notes from these data the insufficiency of enrollment at all levels. Particularly striking is the small number enrolled in technical schools and institutes as compared with the much larger number in the secondary schools, which were primarily university preparatory.

Law of 1920.—The Law of 1920 providing for compulsory elementary education probably constitutes the most significant piece of Chilean educational legislation in the present century. The Law of 1860, which it replaced, had merely established that elementary education was to be free and that the State had the obligation to provide it. The Law of 1920 specified that elementary education was to be compulsory for both sexes, that the compulsory period of attendance was to be 4 years between the ages of 7 to 13, and that parents and guardians had responsibility for compliance. Another provision of the Law of 1920 suppressed the preparatory schools maintained by the *liceos* and specified that completion of the sixth year of the elementary school was sufficient for admission to the *liceo*.

The law of 1920 was a triumph for the ideas of Dario E. Salas, who, as Inspector General of Public Education, had written a book in 1917 entitled *El Problema Nacional*, which dramatized the low state of elementary education. He pointed out that the elementary school which should be considered "the common trunk from which radiate other branches of instruction" had been scorned and disregarded by the secondary and vocational schools.[35]

The Law of 1920 was also a victory for the common people, who, after the prosperity of World War I, were demanding a greater diffusion of education and a greater voice in government.

Reforms and Counter-reforms.—The period of the late 1920's was a time of educational turbulence that coincided with the economic dislocations resulting from the decline of nitrate exports. Numerous reforms were proposed only to be reversed in succeeding administrations, but overall they set guidelines for future development. Before 1929 the University had charge of secondary and higher education. The Ministry of Education had charge of the Commercial Institutes and until 1924, the *liceos* for girls. Technical and industrial schools operated under the Ministry of Industry and Public Works. Ele-

[34] Op. cit. p. 216–217.
[35] Dario E. Salas. *El Problema Nacional.* p. 5.

mentary education operated under the direction of an Inspector General and an autonomous council over which the Minister of Education presided.

In April 1927, a reform measure created a superintendency and eight general directorates, each in charge of one of the following areas: teacher education, secondary, commercial, elementary, agriculture, industrial, music, and fine arts. In December 1927, these general directorates were converted by law into departments of the Ministry of Education. Changes in administration caused temporary abandonment of organizational reforms, which, however, were later re-established. In the main, the reforms set the pattern for the type of centralized educational administration prevailing in Chile today.

Popular Front Government Proposals for Education, 1939.—The worldwide depression of the late 1920's and early 1930's had a disastrous effect on the economy of Chile, bringing in its wake political anarchy and an educational decline. A Popular Front government, with Pedro Aguirre Cerda as its leader, was elected in 1938. The motto of Aguirre Cerda was "to govern is to educate." True to his motto, he set about the task of stimulating the growth of schools. Under his administration the State Corporation for the Development of Production (*Corporación de Fomento de la Producción*) was created. Since he saw education as a key to increasing productive capacity, he promoted the development of technical, industrial, and mining education. His government also concerned itself with elementary education, as evidenced by the creation of more than 1,000 schools. In the University of Chile he supported the new emphasis on scientific investigation and the creation of a new School of Economy and Commerce as an important element in the social and economic transformations which he sought to effect. President Aguirre's death in 1941 and the difficulties resulting from World War II prevented full achievement of his educational goals.

Developments Since 1940

The developments in Chilean education from 1940 to 1958 have been well summarized in a statistical bulletin published by the University of Chile.[36] It is the principal source for data presented in this section. Information on more recent developments will be found in subsequent chapters.

Between 1940 and 1960 Chile's population increased from 5,024,000 to 7,340,000, or approximately 44 percent, a rate of increase far below

[36] Erika Grassau y Egidio Orellana. "Desarrollo de la Educación Chilena desde 1940."

that of school enrollments, as shown in the next four paragraphs.

Elementary Education.[37]—Enrollment in elementary schools increased 68 percent from 524,125 in 1940 to 880,458 in 1957. Private elementary school enrollment increased at a faster rate than that of public elementary schools. In 1940 public schools accounted for 80.3 percent of all elementary students; in 1957 this figure had declined to 67.5 percent. The proportion of male to female enrollment was 51 to 49 percent and remained practically constant over the period 1940 to 1957.

Secondary Education.[38]—Secondary enrollment increased from 44,055 in 1940 to 113,595 in 1956, a growth of 157.8 percent. The proportion of female enrollment increased from 45 percent in 1940 to 51.5 percent in 1956, showing the growing importance of women in economic and political activities for which higher educational levels are deemed necessary.

Technical-Vocational Education.[39]—Enrollment in technical and vocational schools increased from 32,360 in 1940 to 78,936 in 1956, an overall growth for the period of 143.9 percent. Of the total enrollment in 1956, private schools accounted for 8,273 or 10.5 percent. Although the number of enrollees in private vocational schools was small compared to that in public schools, the rate of increase was considerably greater and over the years showed wider fluctuations.

Higher Education.[40]—Total university enrollment increased from 7,846 in 1940 to 19,239 in 1956, an increase of 145.2 percent. In 1956, 72.3 percent of the total enrollment was in the University of Chile; the rest was in private universities. In 1940 the proportion was 77 percent to 23 percent, showing slight increase in the rate of enrollment in private universities. The number of women students increased from 25.1 percent in 1940 to 39.4 percent in 1956. These data reflect the tendency of higher enrollment rates for women at both the secondary and university levels.

General Characteristics of the School Population.[41]—After an examination of the separate levels of education, the following observations about the general characteristics of the school population in the period 1940–57 are in order:

- The entire educational system expanded at an accelerated rate, but there was considerable unevenness in the growth at various levels.
- The highest rate of expansion was at the university level; the lowest at the elementary.

[37] Ibid., p. 14–16.
[38] Ibid., p. 17–19.
[39] Ibid., p. 20–23.
[40] Ibid., p. 23–26.
[41] Ibid., p. 27–45.

- Private school enrollment increased more rapidly than public school enrollment at all levels, with the greatest rate of increase in technical and vocational schools.
- The rate of increase in female enrollment was greater than that in male enrollment at all levels except the technical and vocational.
- The vast majority of the total school population was in the primary grades. The distribution according to levels in 1957 was as follows:

Level	*Percent*
Elementary	82.3
Secondary (including normal)	8.9
Vocational	7.2
University	1.6

- Adding together the percentage enrolled in the elementary schools and in the general secondary schools, one finds that over 90 percent of the students were pursuing a general or academic type of education and that fewer than 10 percent were preparing for vocations or professions in vocational schools and universities.
- A high level of school desertion prevailed at all levels. Studies made of the years 1940–48 show that about 80 percent of the children enrolling in first grade did not complete the elementary school; that 73 percent of the enrollees in the first year of the secondary school did not survive until the sixth, or last year; and that more than 40 percent of the students of the University of Chile did not graduate.

Financing of Education 1940–58.[42]—Like enrollments, educational expenditures showed marked increases from 1940 to 1958. The overall increase in the budget of 1958 compared with that of 1940 was 165 percent. Over the span of 19 years the educational budgets were somewhat irregular. On nine occasions the budget was less than that in the preceding year. In the total Government budget, the percentage earmarked for education varied from 11.5 in 1955 to a high of 19.2 in 1946. The percentage of the national income spent for education also fluctuated from a high of 2.7 in 1953 to a low of 1.4 in 1955.

From 1940 to 1958 the budget for public schools increased by 137.8 percent. Government subsidies to private schools over the same period increased by 854.9 percent, reflecting the growth of private schools that resulted from a law passed in 1951 which granted to private schools a subsidy per pupil equal to one-half the cost of educating a pupil in a corresponding public school. Until 1941 private universities had operated without Government support. From 1941 to 1958 Government subsidies to private universities increased by about 208 percent per year. Overall, Government subsidies to private education increased at a faster rate than that of the funds directed to public schools.

[42] Ibid., p. 47–66.

The distribution of the Ministry of Education's budget over the period 1940–58 reveals new trends and emphases. From 1940 to 1958 the allotment to public elementary education declined from 52.3 to 46.5 percent, and to public secondary education from 15.1 to 12.3 percent. The allotment to public vocational education increased from 8.5 to 12.8 percent; the subsidy to public universities from 6.8 percent to 12.5 percent; and to private schools from 2.8 to 11.2 percent. These data evidence a growing tendency to emphasize vocational and professional education and to increase Government support of private education.

Of all the levels of the school system, none experienced a greater increase in its budget than the University of Chile, where the allocation per pupil practically doubled from 1940 to 1958.

An examination of the major classification of expenditures in public schools reveals the large amount assigned to salaries. In 1956 and 1957 more than 95 percent of the budget of public elementary and secondary schools went for salaries, and less than 1 percent for teaching materials. Since funds for maintenance and expansion were also minimal, this situation placed a heavy burden on the teacher, who found little to work with except her ingenuity.

Education and National Needs.[43]—Although the budget for education grew substantially over the period 1940 to 1958, much of the increase represented the results of inflation, and the uneven growth made educational planning a hazardous task. By 1955 school population represented about 15 percent of the total population. According to the 1952 census, 29 percent of the population ages 7 to 14 were not receiving education, and over 75 percent of the population ages 15 to 19 were not enrolled. Enrollment in vocational schools was insufficient to satisfy the growing need for technically trained personnel, while the specializations of the students of the University of Chile did not conform with the need to provide professional personnel necessary to raise the technical level of agriculture, commerce, industry, and mining.

[43] Ibid., p. 67–84.

3. The School System

Organization

THE EDUCATIONAL SYSTEM OF CHILE is divided into four distinct levels. Each level embraces schools of different types to satisfy specific characteristics and needs of the school population, and all four (to be discussed at length in subsequent chapters) are mentioned here to give an overview of the educational structure:

1. Preschool (*nivel parvulario*) for children between 3 and 6 years old.
2. Elementary (*nivel primario*) for children between 7 and 15, and for adults who need instruction at this level.
3. Secondary (*nivel medio*) for youths, usually between ages 12 and 18. Offers: general, vocational, and normal programs.
4. Higher education (*nivel superior*). Carried on at the University of Chile, the State Technical University, private universities, and other higher education institutions not necessarily of university character. This last group includes the *Escuela Técnica de Alta Costura* (Technical School of Dressmaking) and the Normal School of José Abelardo Nuñez, which prepares elementary school counselors, directors, and inspectors.

Administration

Divided Authority Within the Ministry.—The various levels of the school system are responsible to different administrative offices within the Ministry of Education. Preschool, elementary, and normal school education are the responsibility of the Directorate of Elementary and Normal School Education. Another branch of the Ministry, the Directorate of Secondary Education, has charge of secondary education of the general type. Still another, the Directorate of Vocational Education (*Dirección de Educación Profesional*), administers the secondary vocational schools. Universities operate with relative autonomy. In the Ministry, as well as in the field, divided administrative authority prevents articulation and coordination among the various educational levels and types. In the United States, a superin-

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tendent of schools would have charge of all public schools in a city—elementary, secondary, and vocational. In Chile, each of these types is usually administered separately.

Functions of the Minister of Education.—The Ministry of Public Education is in charge of the administration of public education throughout the country. It supervises private schools and exercises some authority over the State universities. The Minister of Public Education, a member of the President's cabinet, exercises far greater control over education than any State commissioner of education in the United States. Here are but a few of the Minister's functions, but they give an idea of the broad scope of his powers:

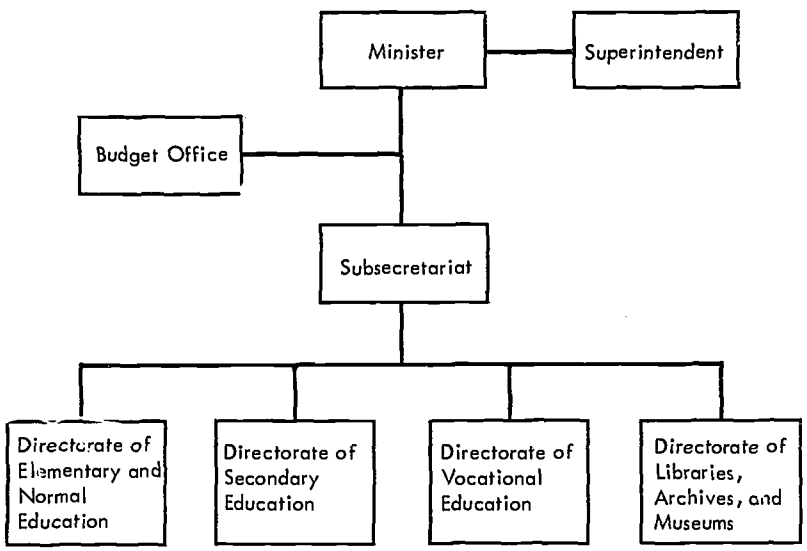
- Determines instructional standards and general programs.
- Approves the University of Chile's budget.
- Dictates decrees of personnel nominations, promotions, leaves, pay, etc.
- Grants scholarships for public and State-subsidized schools.
- Prepares plans and programs of study.
- Supervises efficiency and improvement of teaching personnel.
- Coordinates and supervises libraries, museums, and the National Archives (*Archivo Nacional*).
- Promotes the development of fine arts and general culture.
  Exercises censorship over motion pictures.
- Aids and supervises the Society for the Construction of Educational Establishments (*Sociedad Constructora de Establecimientos Educacionales*).

In performing these functions, the Minister relies on the following subordinate officials: a Superintendent of Public Education; a Subsecretary of Public Education; a budget official; the Directors of Elementary and Normal School Education, Secondary Education and Vocational Education; and the Director of Libraries, Archives, and Museums. Figure 1 shows the structure of the Ministry of Education.

The Subsecretary of Public Education.—The Subsecretary of Public Education has charge of the internal administration of the Ministry. Figure 2 shows the departments under his direction.

The Superintendency of Public Education.—The Superintendency of Public Education, whose organization is shown in figure 3, was created in 1953. Its role still lacks specific definition. The Constitution of 1833 declared that there was to be a Superintendency of Public Education having charge of the inspection and direction of national education under the authority of the Government. The Constitution of 1925 repeated that provision. The University of Chile performed that role for a time, but in 1860 was relieved of the supervision of elementary education. In 1927 (with the granting of autonomy to the University of Chile and the creation of Directorates of Elementary

Figure 1.—The Ministry of Public Education: 1961–62.



SOURCE: Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación* (Documento Informativo No. 41). Presentado por el Gobierno de Chile en la Conferencia sobre Educación y Desarrollo Económico y Social en América Latina. Santiago, 5 a 19 de Marzo de 1962. p. 61–62.

and Normal School Education, Secondary Education, and Vocational Education) control of education passed from a single organization to these separate Directorates within the Ministry. DFL (Decree with the Force of Law) 104 of June 1953, established the Superintendency of Public Education. It was to have charge of the "higher direction and inspection of national education." The purpose of the Superintendency was to exercise a coordinating role among the branches and levels of the educational system.[1] Still lacking is a clear-cut delineation of the responsibilities between the Superintendency and the various Directorates of the Ministry. The absence of such a definition handicaps the Superintendency in fulfilling its coordinating and planning functions.

The Superintendent is appointed by the President for 3 years and may be reappointed. He must have a university degree and 15 years of experience in public education.

Of the several divisions operating under the Superintendency, the most important is the National Council of Education (*Consejo Nacional de Educación*). Some idea of the stature of this body can

[1] Enrique Marshall. "La Superintendencia de Educación Pública," pp. 6–7.

be gleaned from noting the members and the groups they represent:

Minister of Education (presides over meetings)
Superintendent (presides in absence of the Minister)

General Technical Secretary of the Superintendency
Coordinating Adviser of the Technical Office
Subsecretary of Education
Rectors of:
University of Chile, State Technical University, and private universities
Dean of the University of Chile's Faculty of Philosophy and Education

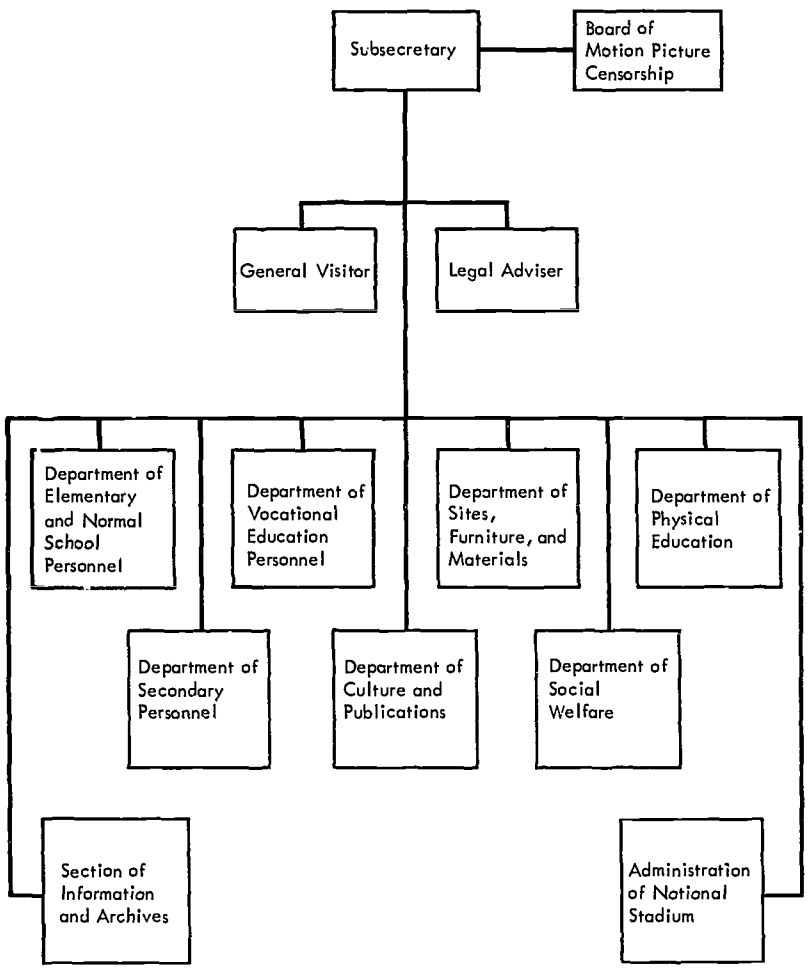
Directors of:
Elementary and Normal School Education, Secondary Education, Vocational Education, José Abelardo Nuñez Superior Normal School, and Technical Pedagogical Institute
4 teachers
(representing elementary, secondary, commercial, and technical schools, respectively)

Representatives from:
1 (private education)
2 (the national organization of parent groups—*Centros de Padres*)
2 (economic activities)
1 (agriculture)
1 (manufacturing)
1 (Corporation for the Development of Production)
1 (labor unions)

The Directorate of Elementary and Normal School Education.—The largest of all directorates is the one that controls preschool, elementary, and normal school education. Its principal divisions are shown in figure 4. This Directorate has charge of the orientation, administration, and supervision of all public preschool, elementary, and normal courses; and applies the legal standards and current regulations to all elementary and normal school education imparted in municipal and private establishments. A department of General Supervision (*Visitación General*) composed of five traveling supervisors (*visitadores*) represents the administrative link with educational administration in the provinces. These five supervisors, each assigned a special zone, are the immediate superiors of the Director General of Elementary Education in each province. They make visits and report the results, and collaborate in the orientation, financing, administration, and improvement of the educational service in all its aspects.

The Directorate of Secondary Education.—The Directorate of Secondary Education, whose organization is shown in figure 5, exercises technical and administrative control of general secondary education. It proposes plans, programs, and textbooks for the schools under its control or supervision. It supervises private education and names *Comisiones Examinadoras de Colegios Particulares* (Examining Commissions for Private Schools). It organizes and develops *Cursos de Perfeccionamiento* (Improvement Courses) for teaching and admini-

Figure 2.—The Subsecretariat of Public Education: 1961–62.

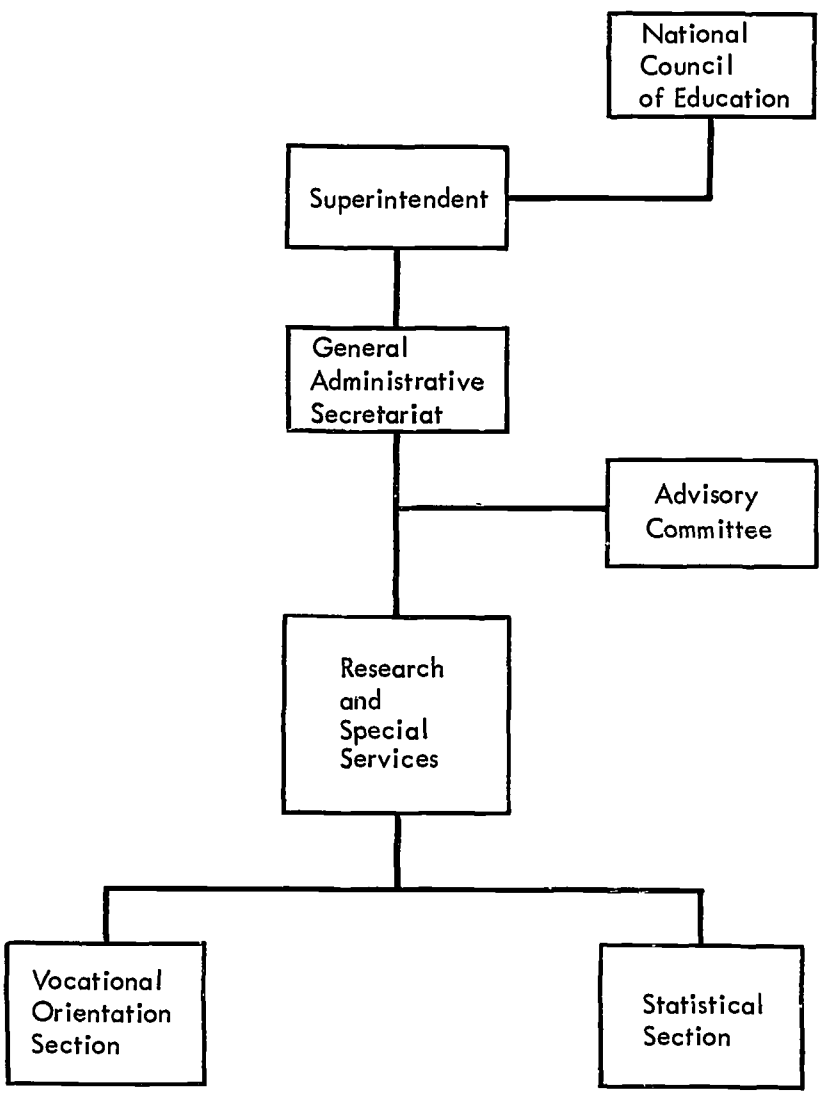


SOURCE: Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 61–62.

strative personnel. A corps of visitors provides supervision and technical assistance directly to the schools in the provinces. Unlike the elementary schools, the secondary schools have no provincial directors.

The Directorate of Vocational Education.—The Directorate of Vocational Education (*Educación Profesional*) has control of varied types of schools at the secondary level, as shown in figure 6.

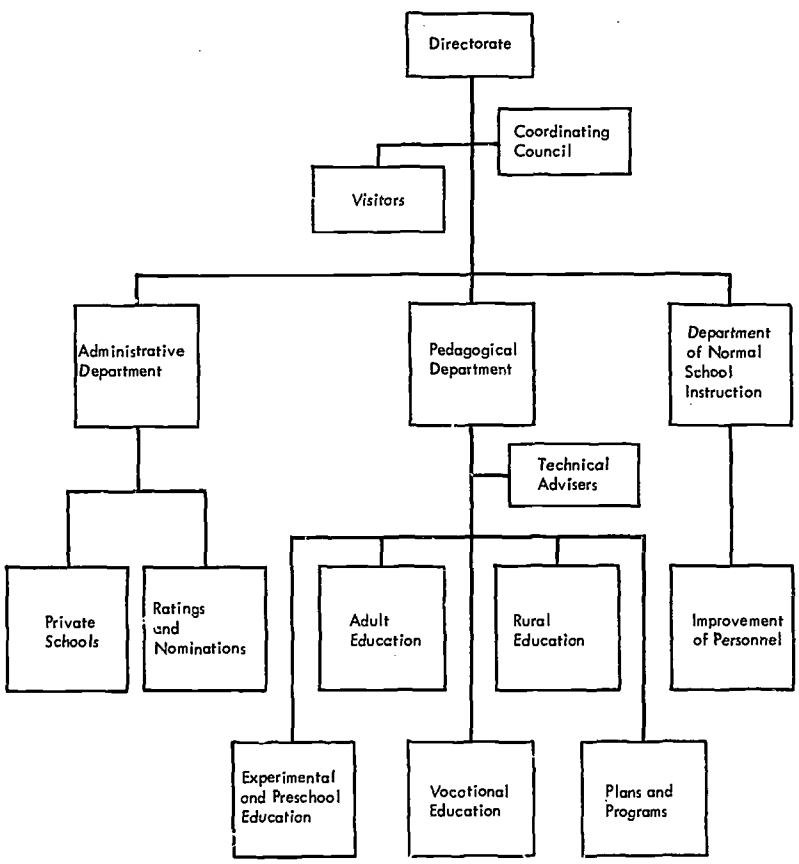
Figure 3.—Superintendency of Public Education: 1961–62.



SOURCE: Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 61–62.

These schools include agricultural, industrial, commercial, and technical schools for women. Like the other directorates, the Directorate of Vocational Education proposes plans, programs, and texts. It

Figure 4.—Directorate of Elementary and Normal School Education: 1961–62.



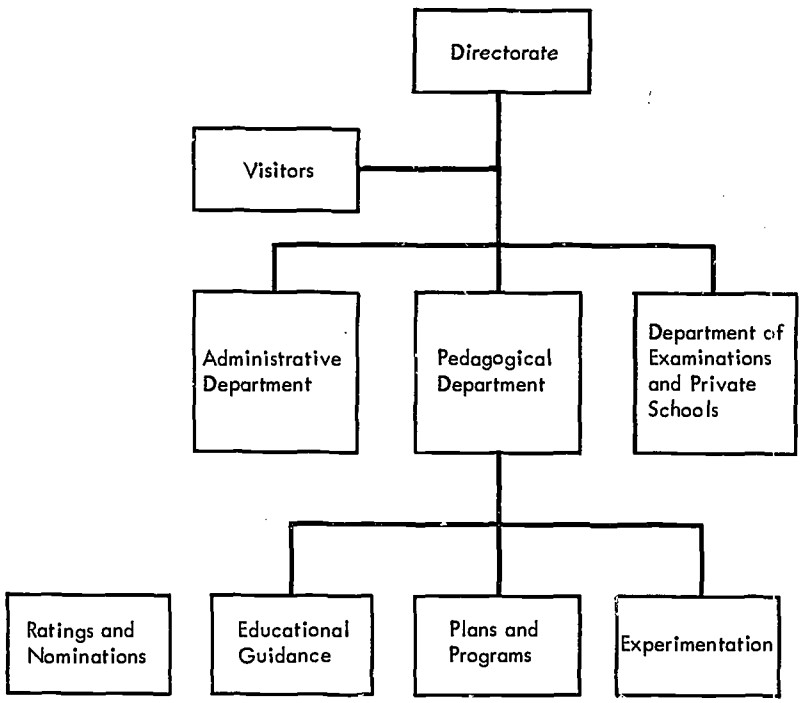
SOURCE: Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 61–62.

supervises private vocational education and names examining committees for private schools. It develops inservice training courses for teaching and administrative personnel and accelerated vocational courses for adults.

The Directorate of Libraries, Archives, and Museums.—This Directorate, whose organization appears in figure 7, maintains important services to the educational enterprise throughout the country in the form of libraries, national archives, and museums. [2]

[2] For a detailed discussion of the facilities offered by the Directorate, see chapter X of *Informe de Chile* (Ministerio de Educación Pública).

Figure 5.—Directorate of Secondary Education: 1961–62.



SOURCE: Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 61–62.

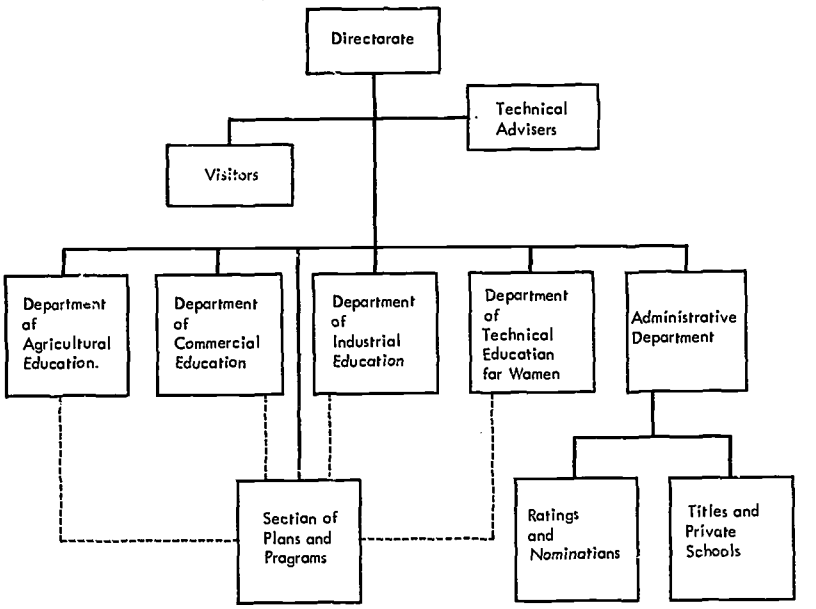
More than 500 public libraries operated under the control of the Directorate in 1963. These did not include the libraries of the seven universities and the National Congressional Library, which has more than 140,000 volumes.

Schools and Enrollment

Number of Schools.—The directorates of the Ministry have under their control all levels and types of education with the exception of the universities. The number of educational establishments, public and private, is indicated in table 1.

One notes from the table that public institutions account for over 63 percent of all schools and that only at the secondary level are pri-

Figure 6.—Directorate of Vocational Education: 1961–62.



SOURCE: Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación*. p. 61–62.

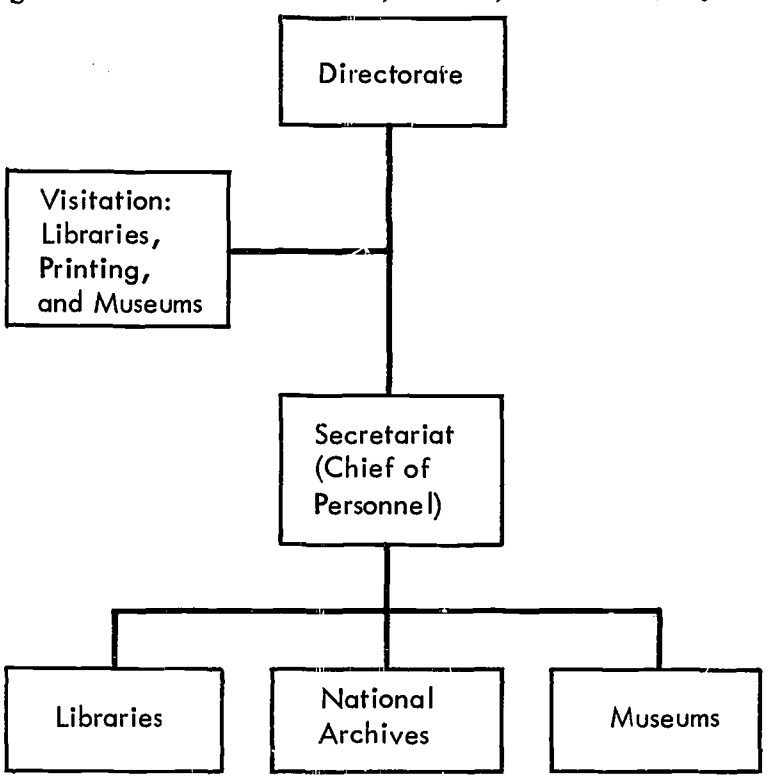
vate schools more numerous. Particularly striking is the disparity in the number of general secondary schools as compared with the number of technical and vocational schools, in view of the country's need for skilled technicians.

School Enrollment.—School enrollment for 1962 is shown in table 2. One notes a majority of male enrollment at all levels except the preschool level. Also evident is the preponderance enrollment (about 70 percent) in public schools. A comparison of the enrollments of 1962 and 1961 shows a substantial increase of more than 100,000 pupils in 1962. At the secondary level almost 70 percent of the enrollment is in the general university-preparatory type, while enrollment in agricultural schools is only slightly more than 1 percent, despite the critical need for stimulating agriculture.

Table 3 shows that Chile has only a small number of schools for atypical children and that the enrollment in these schools is low.

Table 4 shows the distribution of enrollment by sex and grade in each of the six grades of the elementary school. Here one finds statistical evidence of the excessive dropout rate, which is considered one of

Figure 7.—Directorate of Libraries, Archives, and Museums: 1961–62.



SOURCE: Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 61–62.

Table 1.—Total number of public and private pre-elementary, elementary, and secondary schools, by control and level, and breakdown of the number of secondary schools, by type: 1962

Level or type of school	Total	Public	Private
Total, all levels	**9,367**	**5,927**	**3,440**
Pre-elementary	1,083	839	244
Elementary	7,305	4,736	2,569
Secondary	979	352	627
SECONDARY			
Agricultural	225	123	102
Commercial	73	48	25
General	36	13	23
Industrial	628	154	474
Normal school	17	14	3

SOURCE OF DATA: Ministerio de Educacion Pública. *Informe de Chile.* Table 18 (ch. 13, following p. 9).

Table 2.—Total enrollments in public and private pre-elementary, elementary, and secondary schools, by sex, and breakdown of the secondary enrollments by type of school: 1962

Level or type of school	Total	Public		Private	
		Male	Female	Male	Female
Total, all levels [1]	**1,622,044**	**565,922**	**543,013**	**259,052**	**254,017**
Pre-elementary	39,142	15,099	17,119	3,465	3,459
Elementary	1,297,338	465,820	445,096	193,405	193,017
Secondary	285,524	85,003	80,798	62,182	57,541
SECONDARY					
Agricultural	3,455	1,416	69	1,481	489
Commercial	36,833	14,795	10,961	4,235	6,842
General	197,860	50,192	54,972	49,510	43,186
Industrial	40,678	15,992	11,872	6,852	5,962
Normal school	6,698	2,608	2,924	104	1,062

SOURCE OF DATA: Ministerio de Educacion Pública. *Informe de Chile.* Table 9 (ch. 13, following p. 9).
[1] The corresponding breakdown for the 1961 total was as follows: Total of both public and private—1,549,841; *public:* male—540,785 and female—518,141; *private:* male—248,423 and female—242,492.

Table 3.—Number of schools of special education and their enrollments, by type of pupil disability and sex of pupils: 1962

School for—	Number of establishments	Enrollment		
		Total	Male	Female
Total	**18**	**3,530**	**2,242**	**1,288**
Blind	2	141	79	62
Deaf-mute	2	238	135	103
Pupils with physical irregularities	7	759	415	344
Mentally retarded	1	313	210	103
Pupils with social irregularities in—				
Conduct	4	777	615	162
Home problems	2	1,302	788	514

SOURCE OF DATA: Ministerio de Educación Pública. *Informe de Chile.* Table 17 (ch. 13, following p. 9).

Chile's most critical educational problems. Over half the pupils have dropped out before reaching the fourth grade, and over one-third before reaching the second grade. The vast majority of these early dropouts are potential candidates for the ranks of functional illiterates because their formal schooling is too little to prevent their lapsing back into illiteracy.

Table 5 provides similar data for the secondary level, showing a continuation of the unfortunate dropout rate. From grade 1 of the elementary to grade 6 of the secondary school, over 95 percent of the pupils have dropped out.

Table 4.—Enrollment in elementary schools by grade and sex: 1962

Grade	Total [1]	Male	Female
Total [1]	**1,297,338**	**659,225**	**638,113**
1	371,543	191,690	179,853
2	248,207	127,560	120,647
3	213,686	108,724	104,962
4	182,886	94,086	88,800
5	142,300	74,129	68,171
6	138,716	63,036	75,680

SOURCE OF DATA: Ministerio de Educación Pública. *Informe de Chile.* Table 11 (ch. 13, following p. 9).

[1] For purposes of comparison, the source gave partial totals for 1961 (—indicates no data in the source):

Grade	Total	Male	Female
Total	**1,242,337**	**633,177**	**609,166**
1	360,567	—	—
2	234,498	—	—
3	209,605	—	—
4	174,303	—	—
5	133,901	—	—
6	129,463	—	—

Table 5.—Enrollment in secondary schools, by grade and sex: 1962

Grade	Total [1]	Male	Female
Total [1]	**285,524**	**147,185**	**138,339**
1	91,549	48,388	43,161
2	62,582	32,193	30,389
3	46,780	23,420	23,360
4	37,683	18,785	18,898
5	26,816	13,573	13,243
6	18,408	9,631	8,777
7 [2]	1,706	1,195	511

SOURCE OF DATA: Ministerio de Educación Pública. *Informe de Chile.* Table 12 (ch. 13, following p. 9).

[1] For purposes of comparison, the source gave partial totals for 1961 (—indicates no data in the source):

Grade	Total	Male	Female
Total	**273,047**	**140,335**	**132,712**
1	88,654	—	—
2	60,372	—	—
3	44,355	—	—
4	35,826	—	—
5	25,341	—	—
6	16,875	—	—
7	1,624	—	—

[2] Most secondary courses are of 6 years' duration. The work in the seventh grade corresponds to the work in commercial schools and to that in some agricultural and industrial schools.

Finance

The public educational system is financed primarily through an annual budget allocation to the Ministry of Education. From this budget the Ministry finances all public (*fiscales*) schools, grants subsidies to private schools offering free education, and allocates funds to decentralized institutions, including the University of Chile, the State Technical University, the Society for the Construction of School (*Sociedad Constructora de Establecimientos Educacionales*) and the National Committee of School Welfare (*Junta Nacional de Auxilio Escolar*).

The budget allotment of the Ministry of Education has shown substantial increases over recent years as the following figures indicate:[3]

Year	*Amount in escudos*	*Year*	*Amount in escudos*
1958	59,101,274	1961	147,940,000
1959	80,536,615	1962	166,635,00
1960	108,170,878	1963	203,607,000

The growth in the educational budget is more apparent than real since it does not take into account the effects of inflation. In 1959 the dollar was worth approximately 1.05 *escudos;* and in July 1963, 3 *escudos*, indicating the ravages of inflation in the Chilean economy during the intervening years. The disastrous earthquakes of 1960 obviously caused considerable readjustment in Government expenditures so that recent budgets may not be typical. From 1950 to 1960 the Central Government's educational expenditures varied from 17.4 percent (in 1950) to 12.5 percent (in 1959) of its total expenditures.[4]

One source [5] points out that the 1958 national budget was distributed as shown below in descending order of percentage:

Area	*Percentage*	*Area*	*Percentage*
National defense	22	Health	9
Industry, agriculture, etc.	19	Administration	8
Education	16	Justice and police	8
Transportation and communications	13	Planning	5

The sizable allocation to national defense defense provokes criticism from educators, who see potential educational expenditures channeled into the military, where they consider the need to be questionable, while education lacks sufficient funds.

Since Government-financed schools are too few to cover the need for elementary, secondary, vocational, and normal school education,

[3] *El Mercurio.* p. 30.

[4] Ministerio de Educación Pública. *Aspectos de la Situación y Económica Que Afecta a la Educación.* p. 5.

[5] Alfredo Soto Romero. *Manual de Organización, Administración y Supervisión Escolar.* p. 29–30.

the Government, in accordance with Law 9864 of 1951, contributes to the support of private schools that offer such education free. As mentioned in chapter 2, this law specifies that the subsidy per pupil will be equivalent to half the cost of a pupil in a corresponding public institution. In recent years subsidies to private schools have fallen in arrears, and the budget allotment for subsidies to private schools, according to data presented in the deliberations of the Chilean Senate on June 18, 1963, declined 49 percent from 1962 to 1963.[6] These data further brought out the fact that 93 percent of the 1963 budget was used for the support of public schools (*fiscales*), which served only 65.5 percent of the pupils; and only 7 percent for private institutions, which served 34.5 percent.[7]

School Construction

Public school building construction is the responsibility of The Society for the Construction of Educational Establishments (*La Sociedad Constructora de Establecimientos Educacionales*), created in 1937. This is an antonomous corporation capitalized by both public and private funds. The Society has been aided by substantial sums from the U.S. Agency for International Development (previously I.C.A.) following the earthquake damage of 1960. In 1963, school building construction was expected to reach 140,000 to 160,000 square meters, or sufficient capacity for 40,000 to 45,000 pupils.[8]

Despite impressive achievements in school construction, a huge deficit in buildings still remains. In 1960 it was estimated that only 30 percent of the school buildings had been constructed or adapted for the function they were serving; the rest were former dwellings, ceded to or rented by the Government, with little adaptation to their new function.[9] Replacing these unsuitable structures and providing schools for children not being served at present, and for the heavier enrollments expected in the future, will make school building construction a critical need for many years to come.

The School Calendar

The school year begins the first Monday in March and ends December 15. Except for Sundays and holidays the schools are in session

[6] *El Mercurio.* p. 30.
[7] Ibid.
[8] *El Mercurio.* p. 35.
[9] Ministerio de Educación Pública. *Bases Generales para el Planeamiento de la Educación Chilena.* p. 46.

for a total of 235 days per year. Some discretion is allowed the directors of elementary and normal education in the provinces to change the dates of the school year. Normally, elementary schools are in session for 30 hours a week, with 3 hours in the morning and also in the afternoon. Only morning sessions are held on Wednesday and Saturday. In the rural areas and in smaller towns, however, schools are in session 6 hours daily from Monday through Friday. Secondary schools operate on a 36-hour week.

4. Preschool and Elementary Education

PRESCHOOL EDUCATION (*educación parvularia*) and elementary education are administered by the Directorate of Elementary and Normal School Education in the Ministry of Education, the largest directorate within the Ministry, controlling those levels of education in which the great majority of the school population is enrolled. Plans and programs currently governing preschool and elementary education were approved in 1948 and are now in the process of revision.[1]

Preschool Education

Education for Chilean children from 2 to 6 years of age was incorporated into the national system of education in 1948, but kindergartens had existed since 1911, when they were opened under the direction of German teachers who were exponents of the ideas of Froebel.[2] During the next decade courses for the preparation of kindergarten teachers were established in Normal School No. 1 in Santiago. In 1944 the University of Chile opened a school for kindergarten teachers. The methods of María Montessori (as well as the ideas of educators from the United States) have had great influence on the kindergarten.[3]

The principles and programs for kindergartens as currently prescribed by the Ministry reflect the United States influence. The objectives themselves, taken directly by the Ministry from a book, *Education in the Kindergarten*, by Josephine C. Foster and Neith E.

[1] Ministerio de Educación Pública, Dirección General de Educación Primaria. *Planes y Programas de Estudio para la Educación Primaria.*

[2] Amanda Labarca H. *Realidades y Problemas de Nuestra Enseñanza.* p. 9.

[3] Ibid.

Headley, call for the development of the whole child.[4] The official program is as follows:

Area	*Objective*	*Number of hours per week*
Total hours		**18**
Artistic education	Drawing	4
	Music and singing	
Health education	Hygienic and social habits	3
	Personal safety	
Language	Oral expression	3
	Literature	
Motor education	Games	5
	Rhythm and dance	
	Manual activities	
Sensory and intellectual training.	Cultivation of the senses	3
	Objective teaching of natural environment.	
	Objective teaching of social environment.	

Kindergarten enrollment in 1962 totaled only 39,142—32,218 in public institutions and the rest in private.[5] This small enrollment, represents less than 10 percent of children of kindergarten age. In 1962, teachers numbered 1,153, and institutions[6] (most of them attached to elementary schools), 1,083.[7] Private effort in establishing kindergartens has been comparatively small.

Kindergarten teachers are prepared in the *Escuela de Educadoras de Párvulos* of the University of Chile and in special postgraduate courses of the normal schools.

Until school facilities are sufficient to accommodate pupils of compulsory school age, one can expect relatively slow progress in providing educational opportunities for preschool children. A report presented by the Government of Chile at the Conference on Education and Economic Development in Santiago in March, 1962, pointed up the following deficiencies in kindergarten education: lack of understanding of the importance of this level of education, lack of space and independence in school sites, lack of adequate furniture, lack of teaching materials, excessive number of pupils per teacher, and minimal welfare services.[8]

[4] Ministerio de Educación Pública. *Planes y Programas de Estudio para la Educación Primaria.* p. 36.
[5] Ministerio de Educación Pública. *Informe de Chile.* Table 9.
[6] Ibid., table 7.
[7] Ibid., table 18.
[8] Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 43.

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Elementary Education

Administrative Structure.—The Directorate of Elementary and Normal School Education, which administers all elementary education, is composed of a Director, five Visitors (*Visitadores*), each in charge of a zone; a Department of Administration; a Department of Pedagogy; and a Department of Normal School Education. In all, 24 officials function at the national level.[9] They are aided by 26 Provincial Directors, 82 Department and Local Directors, and 534 administrative functionaries.[10]

Schools and Enrollment.—In 1962 elementary instruction was given in 7,305 schools of which 4,736 were public and 2,569 private.[11] Enrollment in these schools was 1,297,338, approximately 70 percent in public schools.[12] The teaching staff numbered 32,100; of these, 26,017 served in public schools.[13]

Types of Elementary Schools.—Elementary schools may be classified into several types, according to the following criteria:

- Relationship to the State (public or private).
- Degree of normality of pupils (schools for normal pupils or for those with mental, physical, or social irregularities).
- Location (urban or rural).
- Sex (schools for males, females, or both).
- Study programs (common, farm, special, vocational).
- Purpose and attention to specific problems (common, consolidated, experimental, and special schools; and annexes to normal schools).
- Number of grades (first, second, or third class).
- Age of pupils (preschool, elementary, adolescent, adult).[14]

Common Elementary Schools.—The vast majority of pupils are enrolled in schools offering the common elementary program as shown in table 6. Common elementary schools may be urban or rural, and they may be either first-, second-, or third-class according to the number of years of instruction offered. They may operate independently, or they may be attached to *liceos* (secondary schools) or to normal schools as *escuelas de aplicación* (practice-teaching schools). A first-class school offers the complete 6 years of elementary education, a second-class school 4 years, and a third-class school only 2 years. In general, urban and rural common schools follow the same curriculum. Their chief difference is that the majority of rural schools are second- or third-class

[9] Ministerio de Educación Pública. *Informe de Chile.* p. C 3–3.
[10] Ibid.
[11] Ibid., table 18.
[12] Ibid., table 9.
[13] Ibid., table 4.
[14] Ibid., p. C 3–4.

institutions, offering a truncated version of the complete elementary curriculum.

Of the 7,305 elementary schools in 1962, 3,220 were rural.[15] Of these, more than one-third were one-teacher schools located in sparsely settled areas; 845 were two-teacher schools, and the rest employed three or more teachers.[16] Schools of the second- and third-class, which offer only 2 or 4 years of the regular 6-year program, are permitted to combine courses in such a manner as to give pupils a good sampling of the total program.[17]

The following pedagogical principles serve as a basis for the elementary program:

- Activity or self-activity (recognition and development of the child's innate abilities).
- Community living (socialization of the child).
- Unity (functional relationship between the parts and the whole).
- *Racionalización* (scientific organization of course content).[18]

Table 6 reveals the emphasis on the integral development of the child. Courses are divided into six major categories: physical, intellectual, manual, esthetic, moral, and differentiated vocational. The number of hours devoted to physical education, mathematics, natural sciences, and music remains constant from grades 1 to 6; while attention to Spanish declines and to social studies increases. Vocational education is reserved for the last 2 years.

Within subject areas, the official curriculum prescribes rather extensive coverage of content and skills in the early grades. Thus, serious questions arise about overcrowding the curriculum, particularly because of the limited tools with which the teacher must work.[19] Since the dropout rate is high in these early grades, there is a natural desire on the part of school authorities to expose children to as much instruction as possible before they leave school. Some critics have questioned the wisdom of this policy, pointing out that a heavily burdened curriculum, superficially taught and poorly learned, may in itself be a significant cause of dropouts.

Pupils who complete the full 6-year elementary program receive a *certificado de estudios primarios* (certificate of elementary studies), which entitles them to admission to secondary schools.

[15] Ibid., p. C 3–6.
[16] Ibid.
[17] Ibid.
[18] Ministerio de Educación Pública. *Planes y Programas de Estudio para la Educación Primaria.* p. 24–28.
[19] With 522 pages, the official document outlining elementary school plans and study programs is heavy and unwieldy for effective use by the teacher.

Table 6.—Number of hours per week, per subject, in common elementary schools, by grade: 1962

[—Indicates subject was not given]

Subject	Grade					
	1	2	3	4	5	6
Total	24	22	26	26	30	30
Physical education:						
Games, gymnasium, sports, hygiene, personal safety	3	3	3	3	3	3
Intellectual education:						
Mathematics: arithmetic and geometry	4	4	4	4	4	4
Natural sciences: zoology, botany physics, chemistry, biology	3	3	3	3	3	3
Social studies: history, geography, civics	2	2	3	3	4	4
Spanish: reading, writing, spelling, literature, grammar, vocabulary	6	6	5	5	4	4
Manual training:						
Creative and constructive work, practical work for the home, domestic science, agricultural activities	3	3	3	3	3	3
Esthetic education:						
Plastic arts, calligraphy	1	1	2	2	2	2
Music and singing	1	1	1	1	1	1
Moral education:						
Religion and morality	1	1	2	2	2	2
Differentiated vocational education	—	—	—	—	4	4

SOURCE OF DATA: Ministerio de la Educación Pública. *Planes y Programas de Estudio para la Educación Primaria*, p. 6-7.

Other Types of Elementary Schools.—Besides common elementary schools, other types are maintained to serve specific purposes. Among them are the following seven:

Escuelas especiales (Special schools).[20]—For children with mental, physical, or social handicaps. In 1962 these schools numbered 22 and enrolled 4,905 pupils.

Escuelas de cultura popular (Schools of popular culture).—Objectives: improving health conditions in the community, supplementing basic education, stimulating productive capacity in arts and trades, and developing a civic conscience. In 1962 there were four of these schools, attended by 2,850 children, adolescents, and adults.

Escuelas hogares (Home schools).—Free boarding schools offering both educational services and family surroundings to abandoned, indigent, or orphaned children; or to children from sparsely settled rural areas. Usually of the first class and functioning throughout the year, these schools in 1962 numbered 46 and enrolled 6,782 pupils.

Escuelas de agricultura (Agricultural schools).—Type One: *escuelas quintas*, which usually offer a full 6-year program and in some cases include a kindergarten and a 2-year vocational course. In 1962 this type numbered 92 and enrolled 27,073 pupils. Each school has up to 5 hectares of land for

[20] Ministerio de Educación Pública. *Informe de Chile*. p. C-3-14.

cultivation. Type Two: *escuelas granjas*, first-class schools, offering either a full 6-year program or one from the 4th through the 6th year, called *cursos granjeros* (farm courses), with major emphasis on agriculture. More than half of the 39 weekly hours of the 4th, 5th, and 6th years are in agricultural subjects or practical work. In 1962 this type numbered 20 and enrolled 2,436 pupils.

Escuelas y grados vocacionales (Vocational schools and vocational grades).—Under the Law of Compulsory Elementary Education, "elementary education" shall consist of 6 years of common elementary school plus 3 years of vocational training in a separate school or 3 additional grades in an elementary school of the first class. The objective of vocational education is to provide the pupil with general technical skills and orient him toward a vocation. The course is 30 hours per week, more than two-thirds of them devoted to strictly vocational training. A year of practice then follows. In 1962 separate vocational schools numbered 58 and vocational courses operating as adjuncts to elementary schools numbered 378. Together, they enrolled 24,050 pupils—10,396 more than in 1961.

Escuelas experimentales (Experimental schools).—Dating from 1929, these schools are expected to try out new organization forms, new curricula, and new methods; and different ways of evaluating the educational process. For the past 20 years, educational experimentation has focused on two main projects: (1) to establish experimental schools throughout the whole of a given geographical area; and (2) to consolidate schools.

Within the given geographical area the aim is to integrate educational services and institutions; achieve unity, continuity, and differentiation of educational functions; and to decentralize administration. The aim is to achieve an integrated educational structure which, coordinated with other social institutions of the area, will serve the needs of the individual, the area, and the country.

In general, consolidated schools support the same principle, only within a school unit and the radius served by that unit. In a consolidated school kindergarten, elementary, secondary, and vocational education all comes under a single administrative head.

During 1962, experimentation was carried on in three geographical areas, including the Department of Arica, where the latest experiment was established under the Superintendency of Public Education. Also in 1962, 13 consolidated schools were operating with 16,782 pupils.

Centros de educación fundamental (Schools for adults).—Two types: elementary schools for adults and special schools for adults. These schools and other aspects of adult education will be discussed in chapter 10.

Problems and Deficiencies in Elementary Education

Many shortcomings characterize Chilean elementary education, the only compulsory level in that country. These shortcomings have been well publicized in reports of the Ministry of Education and can be documented readily by the experiences of teachers and school offi-

cials. Some of the shortcomings arise from the administrative structure, some from the curriculum, some from the internal operation of schools, and some from the social milieu in which the schools function. A few are presented here to point up what Chilean officials themselves consider to be the main deficiences. Two Ministry of Education reports, previously cited, are used as the principal sources of data on this topic.[21]

Administrative Problems.—Problems of an administrative character include the following:

- *Lack of schools.*—Over 170,000 children between the ages of 7 and 15 do not attend school. One of the principal reasons is a lack of schools to attend.
- *Inferior quality of school plants.*—Crowded, unhygienic conditions are all too common in elementary schools, where some classes under the direction of a single teacher number as high as 70 pupils.
- *Inferior selection and preparation of teachers.*—The selection and preparation of elementary teachers will be discussed in chapter 9, but it can be pointed out here that salaries and working conditions hamper the recruitment of competent teachers and that the elementary teacher's academic preparation does not exceed that of a secondary school graduate.
- *Inadequate supervision.*—Little supervisory help is available to promote teachers' inservice growth.
- *Lack of books and materials.*—The Ministry of Education distributes free textbooks and other teaching materials to public elementary schools, but these materials are always insufficient to satisfy minimal needs. For example, in 1962, 781,878 free textbooks [22] were distributed, whereas there were 910,986 elementary pupils to use them—a ratio of less than 1 book per pupil.
- *Lack of coordination among agencies aiding schools.*—Numerous agencies, both public and private and foreign and domestic, provide useful educational and social assistance to the schools; the problem is to coordinate the efforts of these agencies to achieve the most beneficial results.
- *Insufficiency of rural education.*—Lack of schools and inferior school buildings are common problems in rural areas, where the socioeconomic level is low and the need for education acute. Moreover, Chilean rural schools typically do not offer the complete 6-year elementary program, thereby further curtailing educational opportunities where they already are minimal.

Curriculum Problems.—Criticisms directed toward the elementary curriculum include, among others, the following:

- Overlapping of upper elementary and lower secondary grades.
- Lack of adaptation to pupils' developmental levels.
- Excessive uniformity. (Adaptation to local conditions are permitted, but few suggestions are given as to what should be done and how.)

[21] *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 43–44. *Informe de Chile.* p. C–3–17, C–3–28.
[22] Ministerio de Educación Pública. *Informe de Chile.* p. C–3–20.

- Lack of definition as to what constitutes essential common learnings.
- Excessively intellectual, abstract, and verbalistic content.
- Lack of time to accomplish goals. (Particularly true in rural schools offering fewer than 6 years of schooling; and in many other schools operating alternate sessions, with one group in the morning and another in the afternoon.)

Internal Administration.[23]—Two of the most serious internal operation problems are those of handling diverse age groups and of preventing school dropouts. A 1954 enrollment study by the Superintendency of Public Education revealed that only 36.6 percent of the pupils entered the first grade at age 7 or younger. The rest were overage by a year or more. The following tabulation shows the percentage who were 2 or more years older than the normal age for each grade:

Grade	*Normal age*	*Percent overage by 2 years or more*
1	7	23
2	8	32
3	9	34
4	10	27
5	11	21
6	12	15

Part of the problem of diverse age groups results from pupils' repeating grades, the causes for which are varied but include such factors as physical, mental, and social handicaps; school absenteeism; rigidity of the promotion system; and defective evaluation methods.

The problems of overage and grade repetition are related to the problem of school dropouts, since overage pupils and repeaters often become school deserters. Although the dropout rate has declined in recent years, it is still a thorny problem. The following data compare the overall dropout rates for 1954 and 1962.

Grade	*Percent of dropouts*	
	1954	*1962*
1	—	—
2	38	33.6
3	50	42.8
4	63	51.2
5	74	62.7
6	81	70.6

[23] Ibid, p. C 3-20-21.

The heaviest dropout rate occurs in grade 1 and over half the pupils have dropped by grade 4. Studies made by the Institute of Sociology of the University of Chile of school retention in the province of Santiago show striking differences in school retention of children from different economic classes, as shown by the following data:[24]

Grade	*Percent of retention by economic level*		
	Low	*Middle*	*High*
1	100.0	100.0	100.0
2	72.5	82.9	95.1
3	60.8	75.3	92.3
4	48.0	66.9	88.9
5	37.3	58.1	84.9
6	27.8	48.4	79.8

Similar studies point up the higher retention rates in private schools, which operate as annexes to *liceos* and tend to serve the higher economic classes.[25] The obvious conclusion from these studies is that children from lower economic classes have higher dropout rates and thereby lose the opportunity for upward social mobility which a higher educational attainment might provide. In the United States, education is considered a potent factor in social mobility and a strong deterrent to stratified social classes. In Chile, elementary education, although free to all, provides the greatest benefits to children of the affluent classes, who receive more education and better education. Thus, education tends to maintain the status quo or even accentuate class differences.[26]

Problems Arising From the Social Structure.—Most of the problems which affect the elementary school arise, not from the school itself, but from the society which it serves. Low per capita incomes reflect the inability to support schools at an adequate level. Lack of interest and cooperation on the part of parents lessens the local school's effectiveness. The impoverishment of many families, forcing them to use their children's labor for support, is one of the most significant causes for early dropouts. The isolation and primitive living conditions of some rural areas, where education is least effective and badly needed, makes it difficult for these areas to maintain schools and secure qualified teachers, who prefer the comforts and conveniences of the city. To solve all of these problems would amount to a revolution in the socioeconomic structure. Strictly speaking, they are not educational problems; they are a complex of the educational, economic, and social problems that beset a developing nation.

[24] Eduardo Hamuy. *Educación Elemental, Analfabetismo y Desarrollo Económico.* p. 68.
[25] Ibid., p. 69–70.
[26] Ibid., p. 70–71.

5. General Secondary Education

THE PRESENT CHAPTER will be concerned with one type of secondary education in Chile—the general or academic type controlled by the Directorate of Secondary Education in the Ministry. Institutions offering this type are public (*liceos*) or private (*liceos, colegios, and institutos*). They offer a 6-year program, divided into two cycles of 3 years each, with the first cycle providing a basic, general culture background, and the second primarily university preparation.

Statistics: Enrollment, Schools, and Teachers

The 1962 general secondary school enrollment totaled 197,680, distributed as follows: [1]

Public schools		*Private schools*	
Male	*Female*	*Male*	*Female*
50,192	54,972	49,510	43,186

The number of general secondary institutions in 1962 totaled 628, of which 154 were public and 474 private.[2] A total of 5,195 teachers, many of them part-time, served in the public schools; sources gave no data on the number in private schools.[3]

The data above reveal that overall male enrollment exceeds that of female; and that public schools, though fewer in number than private ones, have a majority of all general secondary pupils. In recent years an increasing percentage of secondary pupils has come from the low economic classes. The great majority of these pupils attend public schools.

[1] Ministerio de Educación Pública. *Informe de Chile.* Table 9.
[2] Ibid., table 18.
[3] Ibid., table 4.

Aims

The Ministry's official programs state that general secondary education aims to—

- Develop the physical organism and physical and manual skills; conserve physical and mental health.
- Give a command of Spanish so that the pupil may communicate his thoughts effectively and understand those of others.
- Develop appreciation of different cultures and enrich the possibilities of communicating with the entire world without neglecting the pupil's own continent.
- Give a command of mathematics to the point required by the ordinary necessities of life; develop understanding of mathematical thought.
- Give a command of the facts, concepts, and scientific methods that contribute to understanding the physical and social world and adjusting to it.
- Develop a capacity for esthetic expression and an appreciation of diverse forms of art.
- Impart appreciation of national traditions, the structure and function of the State, and social and civic rights and duties.
- Develop the ability to participate in the life of social groups; develop understanding and appreciation of the interdependence and solidarity of these groups, both on the pupil's own continent and in the world at large.
- Explore and develop aptitudes and special interests in some vocational field.
- Impart knowledge of the principles of economics, especially the national economy; develop appreciation of the value and dignity of work; teach the wise consumption of goods.
- Formulate attitudes and desirable habits such as those of cleanliness, courtesy, honor, initiative, love for a job well done, punctuality, responsibility, truthfulness, and tolerance.

The general secondary school continues the type of general education begun in the elementary school. Traditionally, the purpose of the general secondary school has been to prepare students for the university, but secondary education specialists do not concede such a limited function. Rather, they believe that general secondary education should prepare students for life itself—not just for higher institutions. In the minds of the general public and even the students themselves, however, the tendency is still to emphasize the university-preparatory function.

General Characteristics

Entrance and Graduation Requirements.[4]—To enter the first year of the *humanidades* a student must be at least 11 and not over 14 years old as of March 1 of that school year. In certain cases a school director may admit pupils who exceed the specified age limits, provided they have not attained the age of 16 by March 1. Pupils must have completed the sixth year of elementary school or qualify for admission by entrance tests.

When a student has satisfactorily completed the sixth year of the *humanidades* he receives a diploma (*diploma de licencia secundaria*) issued by the Directorate of Secondary Education and entitling him to take an examination for a certificate or diploma (*bachillerato*). Administered by a university, this examination serves as an admission test.

School Calendar.—The school year consists of 225 days for pupils and 235 days for teachers from the first of March to the middle of December. The year is divided into trimesters: (1) March, April, and May; (2) June, July, and August; (3) September, October, and November. December is devoted to completing the work of the school year; final examinations, and annual grading of pupils' work. The number of class hours per week ranges from 31 in the first year to 36 in the sixth.

Course of Study

The course of study for the 6 years of *humanidades* follows three separate plans: a common plan (*plan común*), based on arts, letters, and science; a variable plan (*plan variable*), which in the third year permits pupils to develop individual interests in artistic, scientific, and technical activities; and a differentiated plan (*plan deferenciado*) in the sixth year, which permits greater specialization in letters, mathematics, and science. Religion is an optional subject in the first 3 years. The *plan común* (table 7) shows the number of hours per week allocated to each subject in each year.

[4] Ibid., C-5-14.

Table 7.—Number of hours per week, per subject, in the *plan común* of the secondary schools, by year: 1962

[—indicates subject was not given]

Subject	Year					
	1	2	3	4	5	6
Total	**31**	**34**	**35**	**34**	**36**	**19**
Civic education	—	—	—	—	2	2
Chemistry	—	—	—	3	3	—
English or German	4	4	4	3	3	3
French (or Italian, Latin, or Portuguese)	—	4	3	3	4	3
Guidance	1	1	1	1	1	1
History and geography	3	3	3	4	3	2
Manual arts (for boys) [1]	2	2	2	2	—	—
Mathematics	5	4	4	3	3	—
Musical education	2	2	2	1	1	1
Philosophy	—	—	—	—	3	3
Physical education	3	3	3	2	2	2
Physics	—	—	—	3	3	—
Plastic arts	2	2	2	2	2	2
Religion	1	1	1	—	—	—
Sciences	3	3	3	3	3	—
Spanish	5	5	4	4	3	—
Variable plan	—	—	3	—	—	—

SOURCE OF DATA: Ministerio de Educación Pública. *Circular No. 29*, 10-V-61. Santiago: E Ministerio, 1961, p. 1.

[1] For girls, the subject is "Education for the home," with the following number of hours per week: 2, 2, 4, and 4, in years 1, 2, 3, and 4, respectively. The extra 2 hours which the girls have in years 3 and 4 bring the total number of hours for them in these years to 37 and 36, respectively.

The *plan deferenciado* permits specialization in the sixth year as follows:

Subject	*Letters*	*Mathematics*	*Sciences*
Total	**18**	**18**	**18**
Biology-chemistry	3	—	—
Chemistry	—	3	3
History and geography	6	2	2
Mathematics	—	4	3
Mathematics-physics	3	—	—
Physics	—	3	3
Sciences	—	3	4
Spanish	6	3	3

The *plan variable*, offered in the third year, helps pupils formulate their vocational plans by exploring and developing interests, aptitudes,

and skills; and by investigating the diverse types of economic activities which the society offers. The courses will vary according to pupil interests and the characteristics of the locality in which the school functions, but pupils are expected to sample courses from two of the following four principal areas: artistic, scientific, technical-manual, and letters. The *plan variable* permits a degree of individualization of the curriculum not possible under the *plan común.*

Shortage of Qualified Teachers

Teachers for the 6-year *humanidades* program are prepared in the pedagogical institutes of the University of Chile and other universities recognized by the State. The rapid growth of general secondary enrollment has far outdistanced the availability of qualified teachers. In 1962 slightly more than half of the 5,195 teachers employed in the public *liceos* had degrees. (Corresponding data for private secondary school teachers were not available, but the percentage of degree-holding teachers in those schools is undoubtedly lower because of less rigorous employment standards.) Shortages are particularly acute in mathematics and science. One study reported more than two-thirds of the teachers of mathematics and physics in the provinces as without degrees.[5] The largest percentage of degree holders is found among teachers of English, history, and Spanish.[6]

A typical teaching load is 36 hours per week, affording teachers little time for preparation and for keeping up with the profession.

Grading System and Examinations

An elaborate system of grades and examinations was prescribed by official decree dated March 16, 1961.[7] Pupils are graded on a seven-point scale as follows:

1=very bad (*muy malo*)
2=bad (*malo*)
3=deficient (*deficiente*)
4=satisfactory (*suficiente*)
5=more than satisfactory (*más que suficiente*)
6=good (*bueno*)
7=very good (*muy bueno*).

[5] Irma Salas S. *and* Egidio Orellana. *Correlación entre el Liceo y la Universidad.* p. 95–96.
[6] Universidad de Chile, Instituto de Educación. *Año Pedagógico 1961.* p. 41.
[7] Ibid., p. 111–26.

The decree specifies written examinations in each course at the end of each trimester and final examinations, which are both written and oral. Pupils may be exempted from oral examinations if their marks average at least "4." No pupil is to fail without having submitted to an oral examination.

Final examinations in each course are prepared according to instructions given by the Directorate of Secondary Education. Teachers from public schools serve on examining commissions for pupils in private schools, a procedure by which considerable control is exercised over private education. The decree further specifies the procedures for personality evaluation of pupils.

To be promoted to the next grade, a pupil must have an average of "4" in all of his subjects or if he has failed one subject an average of "4.5" in the remaining subjects. Repeat examinations are authorized. If a pupil does not meet the required average, he repeats the entire year, not just the courses in which his grades were unsatisfactory.

Experimental Secondary Schools

The Chilean secondary school has been traditionally intellectual and academic. Its curriculum and its administration have lacked flexibility. Leading educators have voiced the following criticisms:[8]

- The secondary school's emphasis on university preparation is valid for only a few pupils.
- The secondary school dedicates itself to imparting content to pupils rather than to preparing them to solve the problems of life.
- It does not satisfy the pupil's needs and interests, nor does it attend to to his complete development.
- The program's rigidity ignores individual differences.
- Instruction is restricted to the classroom and the authority of the teacher.
- Methods of instruction are predominantly passive.
- The secondary school ignores personal, socioeconomic, and pedagogical problems.
- It does not offer sufficient opportunity for teachers to participate in the study of pedagogical problems.

Since 1932, when the first experimental school, *Liceo Manuel de Salas* was established as a dependency of the University of Chile, a concerted effort has been made to bring needed reforms to the secondary school. Experimental schools have been the laboratories to test out new ideas which could then be incorporated into the educational program on a wider scale if they proved beneficial. These experi-

[8] Universidad de Chile, Instituto de Educación. *Año Pedagógico 1960.* p. 122.

mental schools have operated under three different auspices since 1946:[9]

1. *La Comisión de Renovación Gradual de la Educación Secundaria* (1946–49), headed by Dr. Irma Salas.
2. *La Sección de Experimentación Educacional* (1949–53). A dependency of the Directorate of Secondary Education, this organization was created by reorganizing the *Comisión* identified just above.
3. *La Sección de Perfeccionamiento y Experimentación* (since 1953), a dependency of the *Departmento Pedagógico* of the Directorate of Secondary Education. From 1953 to 1957 Dr. Irma Salas served as the department's head, one of the many responsible positions which have distinguished her as a leader in Chile's educational reform movement.

The reform of secondary education was intended to be slow and gradual. Innovations were to come only after thorough trial in experimental schools, after which it was hoped they would be incorporated in all the *liceos* of the country. By 1952 only seven *liceos* had been transformed in accordance with the new pedagogical ideas. The rest continued along traditional lines.[10] Seven experimental schools were operating in 1960.[11]

Although any large-scale reform of secondary education could expect intense opposition, the experimental schools made numerous contributions that were later incorporated generally into the *liceos*,[12] Among these contributions were the following:

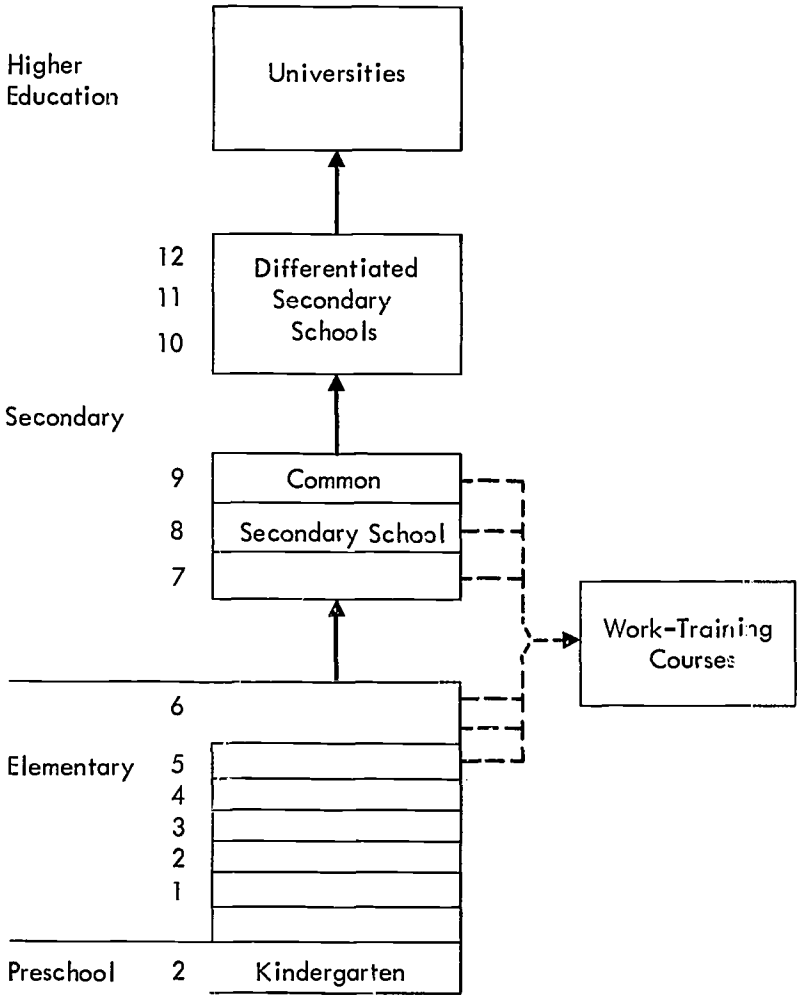
- Advisories (*consejos de cursos*) in all the *liceos*.[13]
- Guidance services.
- A differentiated plan of studies in the second cycle (the last 3 years).
- A variable plan (*plan variable*) in the first cycle.
- Reoriented student activities.
- Personality evaluation and more objective evaluation standards than formerly.
- Subject-matter departments (*departmentos de asignatoras*) and other technical improvements in the common *liceo*.

Possibly the most extensive experimental plan currently in operation is the *Plan de Integración Educacional de Arica*, a 10-year project begun in the Department of Arica during 1961 under the general direction of the Superintendency of Public Education.[14] This plan, shown in figure 8, embraces all levels of the school system, but the changes proposed at the secondary level are particularly far-reaching. According to the *Plan de Arica*, secondary education is divided into two cycles:

[9] Ibid., p. 125.
[10] Ibid., p. 139.
[11] Ibid.
[12] Ibid.
[13] The advisories serve as a basis for student government.
[14] Ministerio de Educación Pública, Superintendencia de Educación Pública. *Plan de Integracion Educacional.*

1. A common cycle of 3 years, which continues the general education of the elementary school.
2. A differentiated cycle of 3 years corresponding to grades 10, 11, and 12. For this cycle, secondary education is offered in the following types of schools (*colegios*) : *Colegio Agrícola, Colegio Comercial, Colegio de Humanidades, Colegio Tecnológico Femenino, Colegio Tecnológico Masculino,* and others in accordance with regional needs.

Figure 8.—Experimental Reorganization of the Educational System—Plande Arica: 1961–71



SOURCE: Ministerio de Educación Pública, Superintendencia de Educación Pública. *Plan de Integración Educacional.* p. 16–17.

The *Plan de Arica* is based on several well-defined principles. (1) It attempts to unify the first 9 years of general education, thereby bridging the gap between the elementary and the secondary school. (2) It postpones the time for pupils to make a vocational decision until they have completed the first 3-year cycle of secondary school. During that cycle pupils receive extensive opportunities to explore various vocational fields while receiving the necessary guidance in making wise vocational choices. (3) The plan attempts to combat the serious problem of school desertion by encouraging pupils to remain in school longer and, if that is not possible, by providing work-training courses for those who drop out in the upper elementary school. (4) The plan proposes a new concept in the integration of educational services adapted to the needs of a region and thereby responds to the frequent criticism of administrative inflexibility and lack of coordination between levels and types of schools.

The five separate plans of studies for the common secondary school under the *Plan de Arica* show considerable variation from the prevailing curriculum already discussed. These plans and the amount of time they devote weekly to each subject are shown below:[15]

Subject	*Hours per week in grade—*		
Plan de Cultura Básica (Plan for Basic Culture)	*7*	*8*	*9*
Foreign language	3	3	3
Mathematics	4	4	4
Religion (optional)	1	1	1
Sciences	3	3	3
Social studies	3	3	3
Spanish	4	4	4
Plan de Desarrollo Físico y Artístico (Plan for Physical and Artistic Development)			
Music	2	2	2
Plastic arts	2	2	2
Physical education	2	2	2
Sports (by groups)	(1)	(1)	(1)
Plan Exploratorio Técnico[2] (Plan for Vocational Exploration)			
Agricultural shop (rural areas only)	(3)	(3)	(3)
Commercial shop	(3)	(3)	(3)
Industrial shop	(3)	(3)	(3)

See *footnotes* at end of table.

[15] Ibid., p. 18.

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Subject	Hours per week in grade—		
Plan de Orientación (Guidance)			
Advisory	1	1	1
Group guidance	1	1	1
Individual guidance	1	1	1
Actividades Electivas (Elective Activities)	(1)	(1)	(1)

[1] One afternoon per week.
[2] In grade 9 the schedule is so arranged that pupils may spend a double session (2 half-days) in the type of shop for which they have shown greatest aptitude.
[3] One morning or afternoon per week.

No information was available at the time the present study was completed concerning the plan of studies for differentiated secondary schools (grades 10, 11, and 12), which were to begin functioning in 1964.

Criticisms and Deficiencies

Experimental schools have tried to alleviate many of the criticisms directed at the *liceo*, but their success in effecting any comprehensive reforms has not been great. The *humanidades* curriculum of the *liceo* continues to be traditional, intellectual, and academic. The main function of the *liceo* is still primarily university preparatory, although leading Chilean educators continue to repudiate the idea of such a narrow function. Enrollment growth in the *liceo* has been substantial, and many of the new enrollees come from the class of unskilled workers. The 19th-century view that higher education should be a training ground for an exclusive élite is under bitter attack. The 20th-century view that the secondary school should provide the educated personnel required by a modern, democratic, industrialized society has not been fully accepted. The *liceo* seems to be caught in the conflict between these two points of view: one repudiated in theory and the other not fully accepted in practice. The result of this conflict has been a kind of stagnation, which has caused many critics to cite the *liceo* as the least progressive and most criticized part of the educational structure.

It is difficult to generalize about the content and quality of Chilean general secondary education because it is offered in such a variety of institutions, both public and private. Like schools at other levels of the school system, secondary schools suffer from insufficient and poorly equipped buildings, a grossly inadequate supervisory structure, poorly prepared teachers, a paucity of educational materials, obsolete methods

based on memorization and repetition rather than thinking, a rigid curriculum, lack of coordination with other levels and types of education, and an excessive dropout rate. A few of these deficiencies, which have been the object of widespread comment among educational and lay leaders in Chile, require elaboration to appreciate their extent and scope.

The Curriculum.—The *humanidades* curriculum of the *liceo* is frequently criticized for its emphasis on literary and scientific studies to the neglect of the artistic and technical. Moreover, it permits little adjustment to individual differences, so that pupils who find it impossible to keep up with the rigorous program drop by the wayside. The *humanidades* curriculum is also criticized for its heavy content emphasis, which discourages all but the most able and which is treated in most schools in a very superficial manner. The average Chilean secondary student is probably exposed to an academic curriculum of greater scope than that which confronts a secondary student in the United States; but if the curriculum is hurried through by an ill-prepared teacher working excessive hours with poor equipment and teaching materials, the academic superiority of the Chilean *liceo* exists only on paper and not in fact. The quality of *liceo* education must be judged, not by the published curriculum, but by the manner in which individual schools and teachers carry it out. The great disparity in instructional efficiency among *liceos* is a well-known fact.

Correlation Between *Liceo* and University.—At the end of the 6-year *humanidades* program, devised and administered by the Ministry of Education, the student who seeks entrance to a university must take a *bachillerato* examination (i. e., an examination for a certificate or diploma) devised and administered by the University of Chile, which thus has a powerful indirect control over curriculum and standards. The *bachillerato* is primarily an achievement rather than an aptitude examination and naturally gives an advantage to pupils from the best *liceos*, who may not be the most able but who have accumulated the kind of knowledge and skills required by this type of examination.

Bachillerato examinations are given in January and July. The number of candidates for the *bachillerato* is growing rapidly in keeping with the growth of secondary enrollment. Approximately half the candidates pass. The record for recent years is given below:[16]

Year	*Total number of candidates*	*Total number passing*
1960	6, 179	2, 320
1961	3, 419	4, 287
1962	9, 959	4, 549
1963 (January)	10, 769	6, 253

[16] *Las Ultimas Noticias.* Santiago de Chile, 25 de Junio de 1963. p. 5.

The high rate of failure in the *bachillerato* examination has made it the subject of considerable debate among educational leaders and Government officials. One can imagine the disappointment and frustration felt by unsuccessful students who find their route to higher education blocked after 6 years of preparation aimed at that goal and who must now find jobs for which their schooling has given them little preparation. The results of the *bachillerato* examinations have raised serious questions about the effectiveness of *liceos* in performing their university-preparatory function. The high attrition rate of students in the first 2 years of university work has also raised a serious question about the validity of the *bachillerato* examination as an indicator of university success.

An influential report of the Ministry of Education reflects the seriousness with which Chilean leaders consider the high failure rate in the *bachillerato* when it points out that this is another dramatic demonstration of the inefficiency of the system, which over a period of 12 years has rejected along the way 97 out of 100 pupils who entered the elementary school.[17] This report further points out that the secondary school is not providing the educational service required for the progress and economic development of society nor is it providing the universities with the raw material which is necessary "to prepare effective professional personnel, to advance scientific and technological research, to cultivate the arts and philosophy, and to train leaders of society." [18]

The Problem of Dropouts.—School desertion continues to be a vexing problem at the secondary level just as it is at the elementary level. A study made by the Superintendency of Education of school desertion at the secondary level for 1957–62 found that only about one-fourth of the pupils who had matriculated in the first year of the secondary school in 1957 were enrolled in the sixth year in 1962.[19] Over half had dropped out by the beginning of the second cycle. The causes for dropouts are in part the failure of the school to satisfy pupils' interests, needs, and abilities. In a large measure, the causes for school desertion reside outside the control of the school, which cannot be blamed for the economic circumstances that force many youth to work to help support their families rather than attend school. The waste of human talent reflected in the excessive dropout rate can have only a deleterious effect on a nation that needs trained leaders and a thriving middle class to help it develop.

[17] Ministerio de Educación Pública. *Bases Generales para el Planeamiento de la Educación Chilena.* p. 37.
[18] Ibid. p. 38.
[19] Ministerio de Educación Pública. *Informe de Chile.* Table 15.

6. Vocational Education

THIS CHAPTER is concerned with a second type of secondary-level education which the Chileans call *educoción profesional*—literally, "professional education," but better translated as "technical and vocational education." This type of education has had a slow growth as a result of the low prestige accorded manual work in the Spanish cultural tradition. With the current emphasis on industrialization and the need for trained manpower, vocational education is receving greater recognition than before, although it still lags far behind general secondary education in enrollment, as shown by 1962 data indicating 80,966 enrolled in vocational schools as opposed to 197,860 in general secondary schools. If these figures were reversed, the result would be a closer approximation to national needs in developing Chile's economy.

Mission of Vocational Education

At the secondary level, the mission of vocational education is clear and specific: to provide the skilled workers and the middle-level technicians required by the national productive activity in all its ramifications and to prepare students to continue their technical specialization at the university level. Many Chileans consider vocational education as both vital and decisive for the country's economic development.

Administrative Structure

Vocational education is administered by a separate directorate in the Ministry of Education called the *Dirección de Educación Profesional.* The *Dirección* has an administrative department and the following

four additional departments, each in charge of a special type of education: Agricultural Education, Commercial Education, Industrial Education, and Technical Education for Girls. A total of 132 educational establishments was functioning under the guidance of these departments in 1963. A small group of five supervisors (*visitadores*) provides the administrative link between the Ministry and the schools throughout the country.

Each of the vocational schools has a similar kind of administrative structure which includes the following positions: Director, General Inspector, Technical Chief, and Chief of Specializations (*Jefe de Especialidades*). To obtain any of the first three positions an applicant must have the title of State teacher (*profesor de estado*), engineer, or technician. The first three positions constitute a coordinating council responsible for the general operation of the plant and the coordination of its varied services. The naming of all personnel—administrative, teaching, and service—in each public school plant and of administrative personnel in the Directorate in the Ministry is done by the Minister of Education and, in the case of the highest administrative offices, by the President himself.

Statistics: Schools, Enrollment, and Teachers

Schools.—Vocational schools may be variously classified: (1) *by source of support*, as public or private; (2) *by the number of years of study which they offer*, as superior, first class, or second class; (3) *by specialization*, as agricultural, industrial, technical schools for girls, commercial institutes, or polytechnical institutes. They may be day schools or night schools, and they may offer instruction to adolescents or adults.

In 1962 three types of public and private vocational schools were reported in operation, with totals as indicated below:[1]

Type	*Total*	*Public*	*Private*
Total	**334**	**184**	**150**
Agricultural	36	13	23
Commercial	73	48	25
Industrial	225	123	102

[1] Ministerio de Educación Pública. *Informe de Chile.* Table 18.

Enrollment.—The 1962 enrollment figures for the same three types of schools were the following: [2]

		Public		*Private*	
Type	*Total*	*Male*	*Female*	*Male*	*Female*
Total	**80, 966**	**32, 203**	**22, 902**	**12, 568**	**13, 293**
Agricultural	3, 455	1, 416	69	1, 481	489
Commercial	36, 833	14, 795	10, 961	4, 235	6, 842
Industrial	40, 678	15, 992	11, 872	6, 852	5, 962

Several observations can be made from the data given above: The number of agricultural schools is small and their enrollment is low. Private schools account for about 45 percent of the number of schools but less than 33 percent of the total enrollment. Private efforts in agricultural education are particularly noteworthy. In every category except private commercial schools, female enrollment is considerably less than male.

Teachers.—The 1962 figures for teachers with and without professional teaching certificates (*títulos*) for public and private vocational schools are given below: [3]

		Public		*Private*	
	Total	*Certificate*	*No Certificate*	*Certificate*	*No Certificate*
Total	**6, 384**	**2, 654**	**1, 823**	**1, 098**	**809**
Agricultural	440	190	62	125	63
Commercial	2, 154	921	577	220	436
Industrial	3, 790	1, 543	1, 184	753	310

These data reveal that over 40 percent of the teachers did not have professional teaching certificates. This condition was somewhat more acute in private than in public schools and most evident in the private commercial schools, where about 66 percent of the teachers had none.

Admission Requirements [4]

For all vocational schools common admission standards apply regardless of the specialization. To be admitted a pupil must (a) possess a certificate stating that he has completed the sixth year of

[2] Ibid., table 9.
[3] Ibid., table 7.
[4] Ibid. C.5 p. 9.

the elementary school, (b) have good health compatible with his studies, and (c) pass an admission test.

Provisions are made for transfer of pupils from the general secondary program. Pupils who have satisfactorily completed the second year of the *humanidades* may take an entrance examination and then take a special course in industrial skills. The following year they may continue in the third year of the regular course. Pupils who have completed the third year of the *humanidades* may enroll in the special course without taking an entrance examination.

Courses of Study

Objectives.—All of the vocational schools are required by Supreme Decree No. 949 of March 8, 1962 to pursue the following objectives:

- Prepare pupils to function efficiently in agricultural, artistic, commercial, industrial, and mining activities.
- Promote personality development.
- Foster civic responsibility.
- Complete general education courses.
- Give adequate preparation for professional studies at higher levels.

These objectives indicate that instruction in vocational schools is to be much broader than that required to develop narrow vocational skills. Each program will include courses of a general culture nature not unlike those pursued by pupils in the *liceos*.

Industrial Schools.—The most numerous of the vocational schools are the industrial, which offer the greatest variety of specializations since they are expected to provide the trained personnel necessary for the country's economic development. In 1963 the industrial schools offered a total of 46 specializations, the four most important of which (in the majority of these schools) were electricity, forging and welding, furniture-making, and mechanics.

Studies in industrial schools of the first class extend for 5 years, divided into a 2-year and a 3-year cycle. Both cycles have a common plan of general culture studies and a differentiated plan arranged according to the specialization. The first year aims to explore the aptitudes and skills of the pupils, all of whom spend some time in orientation shops (*talleres de orientación*). At the beginning of the second year pupils are assigned to courses according to the specializations for which they have shown the greatest aptitude the first year.

After 5 years of study the pupil receives the title of subtechnician (*subtécnico*) in his specialization when he (a) has worked for a minimum of 9 months in industry, (b) has done a research project related to his trade, and (c) has passed an examination.

Industrial schools of the second class offer 3 years of study, the first two being similar to those in schools of the first class. The third year is devoted to the specialization with intensive work in industrial shops. After the third year and after the pupil has completed an additional 6 months in industry, he receives the title of industrial practitioner (*práctico industrial*) in his specialty. The tendency now is to prolong the course to 4 years to provide a firmer grounding in the specialization.

Certain industrial schools take on the character of national centers of instruction because it is not feasible to offer a particular specialization in several schools. Examples of this type are the National School of Graphic Arts, the National School of Tailoring, and the School of Artistic Experimentation. All of these schools offer the title of technician after 6 years of study.

Current policy dictates that specialized industrial schools be established to serve the peculiar needs of particular regions. Examples of schools of this type are a fishery school in the port of Iquique, a foundry school in Rancagua (a mining center), a textile school and a school of electricity in Santiago. With Chile's varied geography and widely dispersed resources, the establishment of regional schools appears to be a promising venture in developing the whole country.

In the area of experimentation, a pilot school of mechanics and electricity has been established recently through an agreement with the West German Government, which will provide the most modern equipment and German instructors to train Chilean teachers in the use of that equipment.

It would be complicated and confusing to detail the course of study followed in the various specializations of industrial schools. In the 5-year program of first-class industrial schools, fully 45 percent of the total hours per week are devoted to courses of general culture and basic sciences. The rest is concentrated on technical courses and activities..

Industrial education at the secondary level is articulated with higher technological education offered by the State Technical University. Graduates from the 5-year program of industrial schools who qualify for university admission may obtain the title of technician in some speciality after 3 years of study. If they desire the title

of engineer, they must continue their studies in the School of Industrial Engineers for an additional three years.

Commercial Schools.—Commercial education is divided into three cycles: the first of 2 years and the second of 3 years, both common for all pupils; and the third of 2 years, divided into three specializations: administrative secretarial work, general accounting, and sales.

More than any other vocational course, that for commercial education emphasizes general culture studies. On the average, about 62 percent of the weekly hours are devoted to courses of this type. Strictly vocational courses increase gradually from 8 percent of the total load in the first year to 60 percent in the last year.

At the end of the first cycle, pupils may choose between two alternatives: (1) continue the second cycle, or (2) follow a course of intensive preparation leading to one of these three specializations: office assistant (*auxiliar de oficina*), secretarial assistant (*auxiliar de secretaría*), or sales assistant (*auxiliar de ventas*). The purpose of these courses is to prepare pupils for middle-level positions in public and private enterprise in a relatively short time. The graduate receives the title of *auxiliar* in his speciality after he has worked for 4 months in public or private employment.

A graduate of the second cycle, which offers courses in fiscal law, foreign trade, merchandising, and statistics, receives the diploma entitled *diploma de estudios de comercio* (diploma of business studies).

The third-cycle graduate of commercial education receives a secondary commercial diploma and may continue higher studies in any of the following professions: auditing, commercial engineering, or teaching in one of the major fields offered by the Technical Pedagogical Institute (*Instituto Pedagógico Técnico*) of the State Technical University. Before he can pursue any course at this university, however, he must first take the *bachillerato* examination in the mathematics speciality.

According to his speciality, a commercial school graduate is awarded a title—administrative secretary, commercial agent, or general accountant—when he has fulfilled the following requirements: a 6-month practicum controlled by the school, a research project, and a public examination.

Pupils may transfer from *humanidades* program without serious loss of time.

Evening and night courses are available for adults. Of 4 years' duration, evening courses lead to the specialties of general accountant and commercial agent. Night schools have an 8-year course of study to establish equivalency with the day schools. To be admitted to

evening courses, a person must have (1) a general secondary diploma (or evidence that he has completed the fifth year of the commercial school) and (2) commercial experience. Night schools require students to have completed the elementary school and to be at least 15 years of age. Both evening and night schools offer the same titles as day schools. In 1961 a total of 4,339 students were enrolled in evening and night commercial institutes as compared with 29,149 in the regular schools. [5]

Several observations about commercial education can be made: *First*, enrollment has grown at an annual rate of 13.5 percent or, in other words, enrollment is doubling about every 7 years.[6] *Second*, the distribution by sex has remained remarkably uniform over the last several years, with male enrollment standing at slightly more than half the total.[7] *Third*, private schools, subsidized by the State, account for less than one-third of the enrollment, a marked decline from 1959 resulting from the closing of nearly 50 percent of the schools functioning that year.[8] *Fourth*, the most popular of the three specializations is accounting; the least popular, but growing at the expense of secretarial work, is selling.[9] *Fifth*, a retention rate of only 18 percent from the first year to the seventh year is low, the situation being worse in private schools, where only 7 percent survive.[10] *Sixth*, the survival rate in public commercial schools is 29 percent, but the dropout rate of private schools reduces the average.[11]

Agricultural Schools.—The least extensive of all types of vocational education, agricultural schools, like commercial schools, have three cycles. At the end of each cycle the pupil receives a title indicating the level of studies completed in his specialty. The graduate of the first cycle (2 years) receives the title of *auxiliar de campo* (rural assistant) after another year of intensive specialization and a minimum of 4 months of practical experience. The graduate of the second cycle (who now has had 5 years of study) receives the title of *práctico agrícola* (agricultural practitioner) after practical experience of 4 months supervised by the school and a report based on that experience. The graduate of the third cycle (who now has had 7 years of study) receives the title of *técnico agrícola* after 9 months of practical experience, preparation of a report on that experience, and an examination.

[5] *Año Pedagógico 1961*, p. 45–46.
[6] Ministerio de Educación Pública, Dirección de Educación Profesional. *Panorama Actual de la Educación Comercial y su Restructuración*, p. 10.
[7] Ibid., p. 11.
[8] Ibid., p. 13.
[9] Ibid., p. 16.
[10] Ibid., p. 18–19.
[11] Ibid., p. 19.

Agricultural schools are classified into categories according to the number of cycles offered. First class schools offer all three cycles, or 7 years of study; second-class schools offer only two cycles, or 5 years of study.

Entrance requirements for agricultural schools are the same as for other branches of vocational education. Pupils may transfer from the *humanidades* curriculum.

Agricultural schools put major emphasis on practical subjects. About 65 percent of the 7-year curriculum's weekly hours are devoted to practical activities on the farms or in the shops. Technical courses are augmented by practice on the plot of land which each school possesses. Among the agricultural subjects studied are agricultural machinery, cattle raising, forestry, gardening, horticulture, soils and fertilizers, and viticulture. An effort is made to adapt the curriculum to the agricultural production of the zone in which the school functions. Agricultural schools for women are governed by a special 5-year curriculum which emphasizes the woman's role in farm life.

With the generally recognized need for land reform and increased agricultural production, agricultural education should hold a position of singular importance. But the number of agricultural schools is so small, their enrollment so low (3,455 in 1962), and their holding power so weak that this need for increased production is not being met. In 1960, for example, over 65 percent of the enrollment was in the first 2 years; less than 2 percent was in the seventh or last year.[12] This situation is all the more serious when one considers that agricultural education is the most costly per pupil of all types of Chilean vocational education.[13]

Technical Schools for Girls.—Education limited to certain specialities that are traditionally considered as female occupational outlets is offered in technical schools for girls. The most important of these specialities (offered in the majority of these schools) are dressmaking, embroidery, food preparation, and weaving. Some schools offer other specialties such as beauty culture, ceramics, and interior decorating.

The structure of technical education for girls is similar to that of industrial education. After the first cycle of 2 years and a third year of specialization, students receive the title of *auxiliar de taller* (shop assistant). After the second cycle of 3 years, they receive the title of *jefe de taller* (roughly translated—chief of the shop). A third cycle of 3 years is found in the *Escuela de Alta Costura* (School of Advanced Dressmaking). Students completing this cycle receive the title of technician in dressmaking when they have had 6 months of practice,

[12] *Año Pedagógico 1950*, p. 42.
[13] Ibid.

have submitted a report on their practice, and have passed an examination in the trade. The technical school's purpose is to train specialists competent in the design and creation of women's apparel.

Admission standards are the same for the technical schools for girls as for other technical schools. Students may transfer from the *humanidades*, and after completing the fifth year, they may pursue pedagogical studies in the State Technical University provided they pass a special *bachillerato* examination.

The curriculum for the first and second cycles includes basic science and general culture course required of all pnpils. This part of the curriculum represents about 37 percent of the total. The rest of the time is devoted to vocational courses and shop work.

Enrollment in the technical schools for girls in 1962 was reported as part of the enrollment of industrial schools. A breakdown of the enrollment data for girls for 1961 shows the following: 20 public schools with 8,637 students and 60 private schools with 4,565 students; 83 students in the *Escuela de Alta Costura;* and 2,152 enrolled in evening courses of public and private institutions.[14] About one-third of all enrollees in technical schools for girls was in private institutions.[15]

Studies made in 1960 of the retention rate in technical schools for girls show that 80 percent of the first-year enrollees in public institutions and 95 percent in private institutions had dropped ont by the fifth, or last, year.[16]

Special Schools.—As mentioned previously, certain schools take on the character of national institutions in that they are the only ones of a particular type serving a specific need. Three such schools are the following: *Escuela de Artes Gráficas*, *Escuela Experimental de Educación Artística*, and *Escuela Nacional de Sastrería* (*Tailoring*). Each is described below:

> The *Escuela de Artes Gráficas* provides training in the specialties of printing and publishing, such as bookbinding, lithography, photoengraving, and printing. The curriculum is organized into two cycles of 4 and 2 years, respectively. The first cycle leads to the title of *oficio;* the second to the title of *técnico en artes gráficas.* In 1961, 9 titles of *oficio* and 11 of *técnico* were granted.[17]
>
> The *Escuela Experimental de Educación Artística*, which operates as a dependency of the Superintendency of Education, has both elementary and secondary levels, with the latter under the control of the Department of Industrial Education. A common plan of general culture courses is required for all students in grades 7, 8, and 9. In grades 10, 11, and 12 a differentiated

[14] *Año Pedagógico 1961.* p. 46.
[15] Ibid. p. 47.
[16] Ministerio de Educación Pública. *Informe de Chile.* No page number.
[17] *Año Pedagógico 1961.* p. 50.

plan permits students to prepare for the *bachillerato* in letters, or careers in the plastic arts or music. The first option corresponds to the studies taken in the last 3 years of the general secondary school. The second option permits the pupil to prepare for artistic studies at the university level and a teaching career in that field. In 1961 174 pupils were enrolled in the *Escuela de Educación Artistica* at the secondary level.[18]

The *Escuela Nacional de Sastreria* trains tailors. Its curriculum is organized into two cycles of 4 and 2 years, respectively. The first cycle leads to a certificate of *operario-sastre* (operator-tailor), and the second to a diploma of *cortador-sastre* (cutter-tailor). Admission requirements include completion of elementary school and an entrance examination. Candidates must be between the ages of 12 and 16.

Criticisms

Chile's current concern about economic advancement has focused new attention on secondary vocational education, which has never been accorded the same prestige as the academic type among Government planners, educators, pupils, parents, and the general public. Lacking in prestige, it has never received the attention and support it required. Now that plans have been made for a long-term economic development by CORFO (*Corporación de Fomento*—State Corporation for the Development of Production), it is becoming increasingly evident that a drastic shortage of semiskilled and skilled workers exists and that this condition will hamper the Nation in achieving its economic goals. National needs, then, have required leaders in both Government and education to re-examine vocational education. Among their findings are the following:

- *Vocational education lacks a plan coordinating it with National needs.*—The growth of vocational education has been haphazard, uncoordinated, and unrelated to the needs which it was intended to serve. Although the shortage of middle-level manpower has been obvious, no thoroughgoing research has been undertaken to show the exact nature of Chile's manpower needs. Research of this nature should be a fundamental step for any kind of efficient planning.[19]
- *Enrollment in vocational education is inadequate.*—Although the number and variety of vocational schools may seem impressive, their enrollment is small when compared with that of general secondary schools and grossly inadequate when compared with obvious manpower needs.
- *The quality of vocational education leaves much to be desired.*—Many private institutions are transitory ventures, more concerned with making money than with upholding educational standards. Moreover, the Ministry's supervisory staff is too meager to be effective for maintaining

[18] Ibid., p. 47.

[19] Studies of this kind are now underway with CORFO collaborating with other institutions.

standards in either public or private vocational institutions. Because of the laboratories and equipment required, vocational education is costly; many schools lack the minimum essentials.

Several years ago Professor Julio Vega [20] of the University of Chile's *Instituto Pedagógico* stated: "There are agricultural schools in which pupils sow and reap on the blackboard. There are industrial schools in which the only shops are the classrooms and the only instruments of work are paper and pencil."

- *Vocational schools lack qualified teachers.*—Over half the teachers in vocational schools have not had any pedagogical training.[21] Qualified teachers of mathematics and physics, important foundation subjects in some of the schools, are particularly scarce. Moreover, to get qualified technicians the vocational schools must compete with industry, which usually offers higher salaries.
- *Vocational education begins too early.*—A child of 12 or 13 is too immature and too young to make a wise vocational commitment, yet the specialized nature of vocational schools forces an early decision upon the child before he has a firm foundation of general education and usually with little or no professional guidance for him.
- *For vocational education as a whole the dropout rate is over 80 percent.*—Most of the dropouts occur during the first 2 years, which emphasize general education and thus do not give the pupil much specialized training.

All of the criticisms noted above are indicative of the serious condition of Chile's secondary vocational education. There are, however, encouraging signs that this condition is being overcome with the country's commitment to economic development, which of necessity must depend upon human as well as physical resources.

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[20] Julio Vega. *La Racionalización de Nuestra Enseñanza.* p. 130.

[21] Ministerio de Educación Pública, Superintendencia de Educación Pública. *Composición del Personal Docente en Servicio en los Establecimientos de la Educación Profesional en el Año 1961.* p. 5.

7. Higher Education: The Public Universities

General Characteristics

THIS CHAPTER, together with the next, could be entitled "The Seven Universities of Chile." That is the number of universities, public and private, recognized by the State. These range in size from the University of Chile with more than 13,000 students to Southern University of Chile with about 300. The present chapter describes some general characteristics of higher education but focuses mainly on the two public universities.

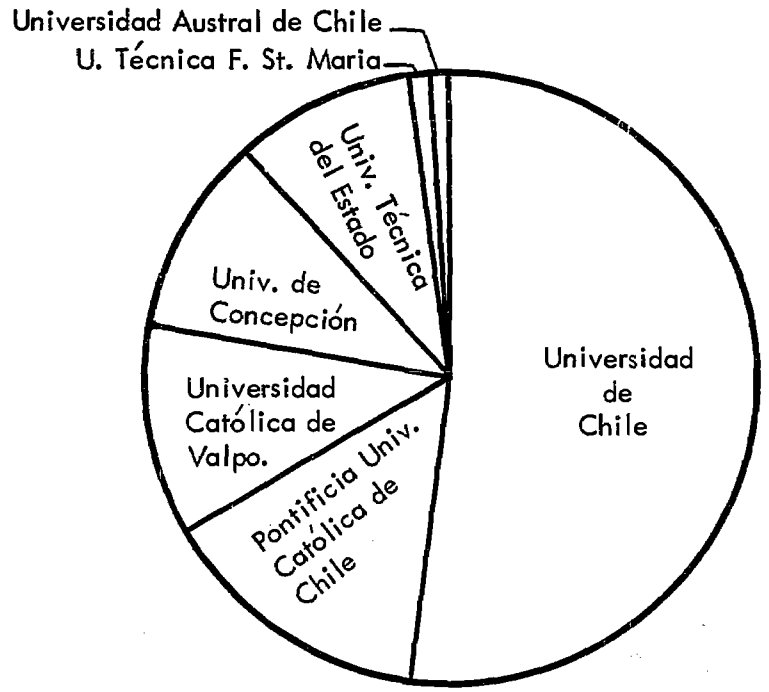
Enrollments.—The 1961 enrollments in Chile's seven State-recognized universities, all coeducational, are given below (also see figure 9 for percentages):[1]

University	*Total*	*Men*		*Women*	
		Number	*Percent of total*	*Number*	*Percent of total*
Total	**25,612**	**16,397**	**64.0**	**9,215**	**36.0**
University of Chile	13,372	7,989	59.7	5,383	40.3
State Technical University	2,401	1,801	75.0	600	25.0
PRIVATE					
Catholic University of Valparaíso	2,863	2,005	70.0	858	30.0
Ferderico Santa María Technical University	293	282	91.2	11	3.8
Pontifical Catholic University of Chile	3,705	2,414	65.2	1,291	34.8
Southern University of Chile	293	185	63.1	108	36.9
University of Concepción	2,685	1,721	64.1	964	35.9

The University of Chile accounts for more than half the total university enrollment. Two of the seven universities are "technical;" the rest may be called "traditional" in that their chief emphasis is on the so-called liberal professions. All of the universities are coeducational, and women represent slightly more than one-third of the stu-

[1] Ministerio de Educación Pública. *Informe de Chile.* p. C–7–8.

Figure 9.—Percentage Distribution of Students Among the Universities: 1961



SOURCE: Universidad de Chile, Instituto de Investigaciones Estadísticas. *Alumnado de la Enseñanza Superior en Chile 1961* (Informativo Estadístico No. 4). p. 4.

dent body. Only two of the five private universities operate under the sponsorship of the Roman Catholic Church, and they accounted for about one-fourth of all university students in 1961. Although university enrollment has more than tripled since 1940 (overall 1940–60 population growth was 44 percent) a total of under 26,000 university students in a country with a population of over 7,340,000 falls short of supplying the Nation's needs for technical and professional personnel. In 1961 the total graduates from six universities (no data available for Southern University of Chile) were 2,355, distributed in the following descending order:[2]

University of Chile	1,599
Pontifical Catholic University of Chile	273
State Technical University	227
University of Concepción	132
Catholic University of Valparaíso	97
Federico Santa María Technical University	27

[2] Ibid. p. C 7–7.

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With the exception of Southern University of Chile, located in Valdivia, and the University of Concepción, located in Concepción, the universities are all concentrated in Santiago or Valparaíso. It should be pointed out, however, that the large universities located in the capital and its environs have established numerous branches and schools in the provinces, thereby fostering some decentralization of higher education facilities.

The traditional university as it has developed in Chile, as well as in the other countries of Latin America, can be described as selective, academic, oriented to the élite, and narrowly dedicated to the professions. Although recent reforms are forcing some modifications, the traditional pattern continues to persist for the most part and is held responsible by critics for the major defects in the system of higher education.

Structure.—In general terms a Chilean university can be described as a loose collection of quasi-independent professional schools. Included in this collection are *facultades*, schools, and institutes. The most important of these is the *facultad*, the chief center of academic influence and control. Each *facultad* is composed of various types of schools, institutes, research centers, or some kind of institution assigned to provide specific services or functions. (Since the term has no exact translation in English it will be used throughout the present publication.)

The rector is the chief administrative officer. He may be elected for a limited term by faculty members, as is the case of the University of Chile, or he may be named by extra-university authorities, as is the case of the Pontifical Catholic University of Chile. The rector has little academic control, but his control over budget allocations enables him to exercise decisive influence. His own personal qualities of leadership probably determine more the degree of his power and influence that do the prerogatives granted him by law or by the university governing council.

Assisting the rector in the administrative control of the university is the *consejo universitario* (university council) composed of members representing the various *facultades* and outside organizations. The *Consejo Universitario* for the University of Chile includes all of the Deans of the various *facultades*, the Secretary-General of the University, the Directors of Secondary and Elementary Education from the Ministry, and two members designated by the President of the country.

The division of the university into distinct academic units called *facultades*, which resemble small independent universities more than divisions of a larger institution, poses a formidable obstacle in achiev-

ing the unity and coordination which the name university implies. Normally students take courses only within their own *facultad*. Basic courses are taught by the professors of each *facultad*, resulting in duplication of teaching, library, and laboratory facilities. Interfaculty seminars and curriculum planning are given little attention. Geographic separation of the various *facultades*, as in the University of Chile, augments the barriers among *facultades* and increases the feeling of independence.

The *facultades* are mainly teaching-learning centers, with research tending to be set apart from teaching. Research units which have developed sporadically in recent years with no consistent pattern of organization, may operate within a single *facultad*, or they may be independent.

Schools belonging to the traditional universities are divided into two levels: those authorized to grant titles like medical doctor, engineer, etc.; and those officially designated as "annexed" schools, which grant titles or certificates considered as inferior to the former. Technical universities also have two levels, technical and engineering.

Graduate schools are a comparatively recent development. In 1959–60 the University of Chile founded a series of graduate schools, including the School of Health and the Graduate School of Medicine, the Graduate School of Chemistry and Pharmacology, and the Graduate Department of the School of Engineering. In 1960 the Federico Santa María technical university established a School of Graduates in Chemical Engineering and planned to expand graduate work later to include electrical and mechanical engineering.

International courses, financed and administered jointly by national universities and foreign institutions or international agencies such as UNESCO, augment the curricular offerings of various institutions.

The institutions of higher education are governed by the Organic Statute of University Education enacted in 1931 and modified by subsequent laws. This law accords the University of Chile considerable authority over the whole system of higher education. In the case of the founding of a new university, the University of Chile administers final examinations and grants degrees until the legislature grants autonomy to the new institution. Although the control of the University of Chile over the *facultades* of other institutions has declined in recent years, it still maintains jurisdiction in some areas such as medicine.

Financial Support.—All universities, both public and private, receive financial support from the State. This financial dependency still leaves the universities with autonomy in matters other than fiscal.

Some idea of the size of the appropriations of the national budget for higher education is revealed by the following: [3]

	1963	*1962*
Escudos	50,581,189	37,392,717
U.S. dollars	558,670	487,830

Although both public and private universities depend on the State for funds, the latter tend to operate with greater overall autonomy than the former and are in fact less handicapped by legal restrictions in effecting reforms.

The Council of Rectors.—The Council of Rectors was created in 1954 by Law 11,575, which allocated a fixed percentage of customs duties to form a fund for university construction and research designed "to increase and improve the productivity of agriculture, industry and mining; to promote an inventory of and wise use of the resources of the country; and to procure a better organization of the different economic activities."

The Council of Rectors is composed of the rectors of all seven universities and its special function is to coordinate the investment of the fund in collaboration with the *Corporación de Fomento* and other technical organizations of the State and private enterprises.

The Council may propose research projects and designate the universities best able to execute them. It may enter into contracts with both national and foreign entities and may devise means to disseminate the results of research.

In addition, the Council is charged with the responsibility of selecting candidates for grants offered the government of Chile by other governments, foundations, or international organizations.

One of the programs receiving preferential attention by the Council is the *Centro Nacional de Información y Documentación* (National Center of Information and Documentation) established in 1962 as a means for collecting and disseminating information on scientific and technical subjects. This center will act as a coordinator of all research services offered by universities and will help them improve their libraries.

The Council is authorized to arrange loans for university construction and for acquisition of laboratory equipment. One of these is called the "Smathers loan," arranged between the Export-Import Bank of the United States and the Government of Chile, which provides Chile with a credit of $850,000 payable over a long term at low interest rates.

[3] Ibid. p. C 7–7. The *escudo* has fluctuated considerably; in July, 1963, it was worth about 33⅓ cents, U.S.

The Council of Rectors is a hopeful innovation forcing a degree of cooperation among universities, which in the past have tended to emphasize competition more than cooperation and independence more than concerted effort. If it proves to be the forerunner of other collaborative efforts among universities, it will render a most significant contribution to the cause of higher education in Chile.

Admission Requirements.[4]—To enter one of the five traditional universities a student must have completed the general secondary school program and the requirements for a *bachillerato* (a certificate or diploma) in humanities. Examinations leading to this degree are administered by teachers appointed by the *Facultad* of Philosophy and Education of the University of Chile.

Fulfilling these requirements does not guarantee admission to university schools because each school may impose additional requirements, including its own entrance examinations.

The technical universities (The State Technical University and Federico Santa María Technical University) accept graduates from the vocational schools who have passed the examination leading to the *bachillerato industrial* given by those universities. Students with a *bachillerato* in humanities may enter if they take a 1-year adaptation course.

A candidate who takes the University of Chile's examinations for the *bachillerato* must state the main field in which he wants to be tested (biology, humanities, or mathematics). This university's *bachillerato* is accepted by all other institutions of higher education in the country.

Since the *bachillerato* examination is of such critical importance as a gateway to higher education, a brief description of it is in order. The University of Chile's examination includes a comprehension and composition test compulsory for all students, a test of reading comprehension in a foreign language, and three tests in the field of specialization. All tests are taken in a 5-day period during the first half of January or July at Santiago or at any of the Provincial centers designated for the purpose. A passing score is 20 points out of a maximum of 35. All candidates have one opportunity to change their main field. Candidates who fail may repeat the examination up to three times. Topics covered in the examinations are stipulated and correspond to the official secondary curriculum.

Individual schools of the universities may require special entrance examinations in addition to the *bachillerato*. Until recently these examinations have focused mainly on the candidate's chosen field of

[4] Information for this section of the report comes from *Admission to Higher Education in Chile*, by Erika Grassau and Egidio Orellana.

studies. In 1961 the University of Chile eliminated from them all questions dealing with subject matter and substituted tests on personality, interests, and aptitude.

A student who wishes to study at a university must take three sets of examinations within a short space of time: those of his secondary school, of the university administering the *bachillerato*, and of the particular university school which he plans to enter. Failure to pass any one of the three can block a candidate's pursuit of higher education.

The admissions system has come under severe attack from many quarters. The increasing democratization of secondary education discussed in the previous chapters has meant an ever-growing number of secondary-school graduates, many of whom become candidates for university admission. Critics point to the undesirable influence that university entrance examinations, which emphasize mainly factual knowledge, have had on the secondary schools, where the upper grades of the *liceo* devote excessive attention to preparing students for the *bachillerato* to the neglect of other objectives. This condition is particularly serious in view of the large percentage who fail to qualify for university admission and who must then seek employment without any specialized training.

Correlation studies of scores on the *bachillerato* examination and university marks have shown a positive but low correlation, raising a serious question about the validity of this examination as a predictor of university success.[5] Moreover, the high rate of failure in the first two years of university work adds further doubt about the prognostic value of the instrument.

As long as university facilities are limited, admissions will necessarily continue to be selective and competitive, but in view of the inadequacy of present admission criteria, the search for more objective and reliable measures will attract increasing attention.

Tuition and Fees.—Matriculation fees tend to be very nominal in Chilean universities and do not constitute a serious obstacle since the economically distressed student may apply for exemption from these fees, small as they are. Welfare and health services are also available. At least one university, the Federico Santa María Technical University, offers its advanced students room and board, clothing, and a stipend. A concerted effort has been made to keep the tuition costs of higher education at a low level so that students will not be excluded for economic reasons. This concession is of little value, however, to the student who must work to support himself and his family. Extremely low tuition rates raise the question of the advisability of

[5] Ibid. p. 24.

subsidizing the education of the more affluent students who could obviously pay more.

The University of Chile

Academic Units.—The University of Chile, established in 1842, is the predominant institution of higher education. In 1963 it comprised the following entities: 13 *Facultades*, 52 Schools, and 54 Institutes and Centers of Research. The majority of these are located in Santiago; eight schools are schools in Antofagasta and Valparaíso and *Colegios Regionales* (Regional Colleges) in Antofagasta, La Serena, and Temuco. The dominant university in the country, the University of Chile has authority to prescribe curricula and examinations in certain fields for other universities, thereby exerting a standardizing influence over higher education.

The *facultades* and schools of the University of Chile and their locations (only at Santiago if no location is shown) are given below:

Facultad [1]	*School of—* [2]	*Location*
Agronomy	Agronomy	
	Agricultural Practice	
	Forestry Practice	
Animal Husbandry and Veterinary Medicine	Animal Husbandry and Veterinary Medicine	
Architecture	Architecture	
	Course in Architecture	Valparaíso
Chemistry and Pharmacy	Chemistry and Pharmacy	
	Graduate School	
	Pharmacy Career	
Economic Sciences	Accounting	
	Center of Economic Planning	
	Economics	Santiago & Valparaíso
	Graduate School of Economic Studies	
Fine Arts	Applied Arts	
	Fine Arts	
	Stone Cutting	
Juridical and Social Sciences	Law	Do.
	Political and Administrative Sciences	
	Social Service	Do.
Medicine	Health	
	Medicine	
	Nursing	Do.
	Obstetrics and Pediatrics	Do.
	Graduate School	

See footnotes at end of listing.

Facultad [1]	*School of—* [2]	*Location*
Odontology	Dental School Odontology	Valparaíso
Philosophy and Education	*Department of:* Mathematical and Natural Sciences	
	Philosophy and letters	
	Social Sciences	
	Institute of Technical and Physical Education	
	Pedagogical Institute	Santiago & Valparaíso
	Journalism	
	Library Science	
	Psychology	
	Sociology	
	University Regional College of: Antofagasta	
	La Serena	
	Temuco	
Physical Sciences and Mathematics.	Civil Construction	
	Engineering	
	Geology	
	Physics and Mathematics	
	Graduate School of Engineering	
Department of Sciences of Valparaíso.	Institute of Valparaíso	Valparaíso

[1] When the entity is not called a *facultad*, the specific terminology is given.
[2] When the entity is not called a school, the specific terminology is given.

The Administration.—All these semiautonomous entities are administered by a Rector and a University Council (whose membership has already been described). Unlike many other Latin American universities, where students have substantial representation from their Student Federation on the University Council, the University of Chile permits the students to have a voice but no vote. The members of the combined *facultades* (*claustro pleno*) nominate the Rector, who is then appointed by the President of the country.

Each *facultad* is headed by a dean elected by members of the faculty. The dean exercises academic control over all the schools and institutes within his jurisdiction. The work of individual schools is administered by a director.

The Staff.—The university staff consists of teaching, academic, and honorary members. In 1961 a total of 7,920 staff members was employed.[6] Fewer than half of this number performed teaching func-

[6] Universidad de Chile, Instituto de Investigaciones Estadísticas. "La Universidad de Chile en 1961." *Boletín Estadístico de la Universidad de Chile.* V:1:25. Santiago, 1961.

tions and of these fewer than 30 percent were full time.[7] The excessive proportion of part-time teachers who are paid by the hour is frequently cited as a serious obstacle in improving the quality of university instruction. Fortunately, the proportion of full-time teachers is climbing, but lack of funds for adequate salaries continues to inhibit the expansion of full-time staff. Moreover, the absence of a strong graduate program, as well as programs aimed at preparing university teachers, means a scarcity of well-qualified personnel from which to recruit prospective university professors.

The Student Body.—Of the 13,372 regular students enrolled in 1961, some 40 percent were women.[8] The schools with the largest enrollment were the Pedagogical Institute, the School of Engineering, the School of Law, and the School of Medicine in Santiago.[9] According to the careers pursued, the largest group (more than one-fourth) was preparing to be secondary teachers. The next largest group (about 12 percent) was studying law, with medicine enrolling the third largest group (8.5 percent).[10] Many of the schools were extremely small; 27 enrolled less than 1 percent of the total.[11]

A resumé of personal data about the students in 1961 discloses the following facts:[12] Over 97 percent were Chileans; about 70 percent were Roman Catholic, and about 23 percent professed no religion; about 92 percent were single; the average age for the university first-year students was between 20–21; 25 percent of the fathers of university students had completed university studies; over 70 percent resided with their families while attending the university; and parents furnished the financial support for over 70 percent of the students.

The same political parties prevailing through the country are found in the student body and vie for control of the Student Federation. Students frequently resort to direct action, such as stoppages and strikes, to protest obsolete facilities, outmoded curricula, unpopular professors, and numerous other grievances.

The courses of study vary in length from 2 to 3 years in the *colegios regionales* to 7 years in the School of Medicine. More than one-third of the students drop out at the end of the first year, mostly for failure in their studies.[13] Students who complete their studies earn the degree of *licenciado* and *doctor* and professional titles corresponding to the various university schools. In 1961 the University of Chile con-

[7] Ibid.
[8] *Año Pedagógico 1961.* p. 64.
[9] Ibid.
[10] Ibid.
[11] Ibid.
[12] Universidad de Chile, Instituto de Investigaciones Estadísticas. "La Universidad de Chile en 1961." p. 49–53.
[13] Erika Grassau and Egidio Orellana. *Admission to Higher Education in Chile.* p. 26.

ferred 1,246 professional titles, 267 *licenciaturas*, 98 titles of professor of elementary education, and revalidated 8 professional titles.[14] The largest number of titles (246) was *profesor de estado* (State teacher).[15]

Regional Colleges.—One of the most promising developments toward extending higher education opportunities for groups and regions not adequately served is the program of regional university colleges established by the University of Chile in 1959. The first of these institutions began operations in Temuco in 1960, followed by another in La Serena in 1961 and a third in Antofagasta in 1963. Several more have been projected for the next few years at the following locations: Arica, Osorno, Punta Arenas, Santiago, and Talca. Modeled somewhat after the California system of junior colleges, the university regional colleges mark a notable innovation in higher education, which will be closely observed, not only in Chile, but in other Latin American countries which need to diffuse higher education facilities.

The objectives of the regional university colleges are to:

- Deepen and broaden the general education of university students.
- Provide an academic foundation for higher studies.
- Offer opportunities to study middle-level careers in accordance with the needs of the region.
- Serve the cultural interests of the community.
- Promote scientific and technological research.[16]
- Provide technical assistance to the institutions of the community.

These objectives resemble closely those of junior colleges in the United States.

The regional university college program aims to correct some of the most commonly cited defects in the educational system: the concentration of higher educational facilities in the capital and a corresponding dearth of such facilities in the provinces, the lack of educational opportunity for certain social groups, the absence of a general education program at the university level, the lack of vocational educational opportunity for secondary graduates, the need for inservice training for elementary and secondary teachers, and the lack of programs of university cultural extension in local communities.

The alternative to university regional colleges would be a proliferation of universities of the traditional type, each struggling with limited funds to maintain the complex and comprehensive structure

[14] *Año Pedagógico 1961.* p. 75.
[15] *Ibid.* p.77.
[16] Universidad de Chile. *University Colleges in 1963.*

of a typical university. Such an alternative, argue the critics, would be inefficient and wasteful and would dilute the overall quality of higher education. Attachment of the university regional colleges to the University of Chile is expected to provide them with the prestige of being part of the country's leading university.

The university regional colleges organize their courses of study around four areas: arts and letters, biological sciences, physical sciences and mathematics, and social sciences. Students may choose one of these as their specialization while improving their general education in the other three areas at the same time. About 70 percent of the student's time is devoted to the area of specialization. Each regional college maintains a guidance service under the direction of trained counselors to assist students in making their choices. Maximum number of class hours per week is 30, with a minimum of 18.

Successful completion of a prescribed 2-year curriculum of basic courses entitles a student to a *bachillerate universitario* and the opportunity to continue studies in the *Facultad* of Philosophy and Education of the University of Chile or in the Southern University of Chile.

After the first year of basic courses, students may pursue programs leading to the following middle-level careers, for which two to four semesters' preparation is required:

Administrative technician
Agricultural technician
Artistic designer
Chemical technician
Home counselor
Librarian
Social service assistant
Technical assistant in construction

In order to correspond to the principal needs of the region, these vocational offerings are flexible.

The university regional college at Temuco also offers a 2-year course to prepare elementary teachers. With enrollment limited to 50, students are selected on the basis of their grades in the *liceos*, and they enter the program without taking the first year of basic work.

The university regional college at Temuco offers the first 2 years of nurses' training, which can be continued at the Southern University of Chile. Temuco also offers the first year of obstetrics, which can be continued at the University of Chile in Santiago or Valparaíso. Students at the regional colleges of Temuco and La Serena may take the first 2 preparatory years in selected secondary education fields and then complete their courses in the *Facultad* of Philospohy and Education at the University of Chile or the Southern University of Chile.

Enrollment data for 1963 at the three university colleges showed the following distribution: [17]

Study area	*First year*	*Study area*	*Second year*	*Third year*	*Total 3 years*
ANTOFAGASTA UNIVERSITY COLLEGE [1]					
Total	84				
Arts and letters	11				
Biological sciences	37				
Mathematics and physics	9				
Social sciences	27				
LA SERENA UNIVERSITY COLLEGE					
Total	156	Total	79	39	274
		Administrative technology	6	7	
		Fine arts	------	18	
		Library science	9	----	
		Secondary education	32	----	
		Social work	21	14	
		Technical secretarial work	11	----	
TEMUCO UNIVERSITY COLLEGE					
Total	285	Total	199	27	511
Arts and letters	17	Administrative technology	23	15	
Biological sciences	34	Agricultural technology	18	12	
Nursing	37	Chemical technology	20	----	
Obstetrics	16	Elementary education	104	----	
Mathematics and physics	28	Fine arts	5	----	
Primary education	55	Home guidance	18		
Secondary education	57	Library science	11		
Social sciences	41				

[1] Opened only in April 1963, this institution was not offering second- or third-year courses that year.

[17] Universidad de Chile. *University Colleges in 1963.* p. 1.

The university regional college program has had support from the Ford Foundation. A team of distinguished educators from the United States sent by the Ford Foundation to Chile called it "one of the most important educational developments in Chile today." [18] The previous Rector of the University of Chile, Juan Gómez Millas, pushed the movement vigorously. A new Rector was elected in August 1963, but information concerning his policies on regional colleges was not available when the present bulletin was prepared.

One of the greatest obstacles that needs to be overcome is that of acceptance of credits earned in the university regional colleges by other universities, including schools of the University of Chile. Individual *facultades* understandably try to guard their traditional right to control all courses, basic and professional, leading to a degree or title in their professional schools. The concept of basic courses offered in common to students from different *facultades* is not widely accepted at the University of Chile, although the idea is taking hold in some other institutions.

Acceptance by well-established *facultades* of the University of Chile would seem to be an indispensable requirement if the university regional colleges are to thrive as preparatory institutions for upper-level professional courses. Once the University of Chile through its various schools has fully recognized its own regional colleges, then acceptance of these institutions by other universities should prove to be an easier task than at present.

Advocates of the university regional colleges further hope for some institutional changes in the professional *facultades*, by which 2 years of liberal arts training would be offered to students from all schools in common, thereby eliminating the waste and duplication that result from offering basic courses in each *facultad*. Moreover, students would have the advantage of delaying their professional commitments for 2 years and presumably would arrive at a wiser choice. Though the arguments for such a reform may be meritorious, no one anticipates a ready acceptance in view of the long-established tradition of self-contained professional schools.

Department of Sciences in Valparaíso.—A small beginning toward concentrating basic science instruction was made in 1958, when a Department of Sciences was establshed at Valparaíso. Intended to provide basic science instruction for students who would later study

[18] Ford Foundation Mission to Chile April 25–May 31, 1961. *Study of Opportunities for Support of Higher Education.* p. 20.

dentistry, engineering, medicine, pharmacy, and the other professions in Santiago or Valparaíso, the department is headed by a council representing the deans of the related professional *facultades* in Santiago. It was hoped that this department would serve as a model for similar developments there.

Institute of Education.—An example of the increasing attention given research at the University of Chile is the Institute of Education founded in 1956 as the Institute of Educational Research. Its name was changed in 1960 to Institute of Education, but its research functions remained intact.

The objectives of the Institute, as stated in one of its own publications, are the following:

- Carry out and coordinate research on educational problems.
- Train specialists in the field of educational research.
- Cooperate with the teaching and research activities of the Department of Education of the School of Education of the University of Chile.
- Provide scientific and technical assistance to educational institutions and teaching staffs.
- Insure the diffusion of the scientific achievements in the field of education, and to promote the exchange of information and experiences.[19]
- Prepare technical educational material related to programs of evaluation, guidance, study, textbooks, etc.
- Help improve the secondary school system's personnel.

The wide scope of the research activities of the Institute is revealed by the following published studies:

Año Pedagógico (Educational Yearbook 1959, 1960, and 1961).

Correlación entre El Liceo y la Universidad (Correlation Between the Liceo and the University 1960).

La Educación en Una Comuna de Santiago—Comuna de San Miguel (Education in a District of Santiago—District of San Miguel). Three volumes published in 1962 and 1963.

Three recent studies covered the following topics respectively: (1) a pilot plan of education in the province of Coquimbo, (2) the articulation of elementary and secondary schools, and (3) entrance into the university. Under preparation in 1963 were studies of secondary voca-

[19] Universidad de Chile, Instituto de Educación. *Institute of Education, University of Chile.* p. 1.

tional education, reading comprehension at the high-school level, and university student withdrawal.

The Institute also maintains a specialized library of nearly 2,000 volumes and a large selection of bulletins, documents, journals, and periodicals. It serves as a contact agency for exchange with international organizations interested in education.

University Elementary and Secondary Schools.—The University of Chile also maintains elementary and secondary schools, whose enrollment in 1961 was distributed as follows: an elementary school (annex to the *Liceo* Manuel de Salas) with 1,007 pupils; the *Liceo* Manuel de Salas and the Institute of Secondary Education, 944 pupils; and the School of Agriculture (*Práctica de Agricultura*), 47 pupils.[20]

University Extension Activities.—The Department of Cultural Extension provides a varied program of cultural and educational activities in Santiago and in provincial centers. Especially significant are the seasonal schools (*escuelas de temporada*). Of short duration, usually about 2 weeks, they focus on a variety of themes to satisfy a broad spectrum of public interest. Concerts, forums, lectures, roundtables, and seminars, are additional cultural offerings.

Areas of Emphasis.—The University of Chile is recognized as one of the leading universities of all Latin America. Many of its *facultades* and departments are accorded high distinction, not only in Chile but abroad. Engineering has been a strong area, with the University of Chile turning out about half the total supply of engineers in Chile. Basic sciences are receiving high priority from the standpoint of teaching and research, although overcoming past neglect and organizational problems hampers rapid progress.

Economics is a particularly strong field. The Ford Foundation Mission in 1961 called the University of Chile's program in economics "undoubtedly the best in Latin America today."[21] The undergraduate program in economics and the Institute of Economic Research are closely correlated. With assistance from the Rockefeller Foundation a Graduate School of Latin American Economic Studies has been established which has a close working relationship with the University's *Facultad* of Economics. This program aims principally at students from other Latin American countries, but Chileans also attend.

The *Facultad* of Economics also offers a program in administration,

[20] *Año Pedagógico 1961.* p. 64.
[21] Ibid. p. 24.

including courses and an Institute of Administration which conducts research and supplies technical assistance to government and business. Through a cooperative relationship with Cornell University financed by I.C.A. (now A.I.D.), the Institute has developed a program of industrial and labor relations. The expressed intent of the *Facultad* of Economics, already strong, to focus greater attention on research appears to be fully consonant with the country's preoccupation with economic development.

In spite of its many handicaps (such as a scattered campus, a loose administrative organization, and a lack of resources, facilities, and qualified staff) the University of Chile gives the impression of an ambivalent institution, anxious to explore and experiment yet reluctant to cut itself away from the safe moorings of the past. It is moving forward, and its many recent innovations provide convincing evidence of its desire to maintain leadership in helping the Nation achieve its stated goals.

The State Technical University

Reasons for Establishment.—The State Technical University (*Universidad Técnica del Estado*) is a comparatively recent creation, resulting from the fusion in 1947 of the following institutions: the School of Engineers in Santiago and the courses in Copiapó and La Serena, the Industrial Schools in Concepción and Valdivia, and the School of Arts and Crafts in Santiago. The Organic Statute governing the operation of the University was enacted in 1952.

The need for skilled technicians had been realized as early as 1849, when the School of Arts and Crafts was established. The rise of mining activities in the last half of the 19th century brought about the establishment of a School of Mines at Copiapó in 1857 and another at La Serena in 1887. World War I and World War II, by upsetting normal trading channels, forced Chilean industry to produce products previously imported, thereby creating a demand for more specialized laborers and schools to train them. Demand for skilled technicians continued to mount after World War II as industrial development became a national objective. This was the situation that led to the founding of the State Technical Unversity, where public efforts to educate technicians and engineers would be centralized in a single university-level institution.

Objectives.—The objectives of the State Technical University, clearly stated in the Organic Law which governs it, are to—

1. Promote scientific and technological research in relation to the economic problems of the country and better use of natural resources.
2. Educate technical and professional personnel required by the national economy.
3. Promote interest in technical and economic progress through a systematic university extension program.
4. Stimulate creative activities arising from various levels of technical and economic activities.

Administrative Organization.[22]—The State Technical University differs markedly in its structure from other universities organized along more traditional lines. One reason for the difference is the geographic dispersal of the university's schools, a factor that has influenced their organization as federal entities. Another reason may be attributed to the university's two-fold mission: training of personnel for industry and teachers for secondary vocational schools.

The highest position is that of Rector, appointed for a 4-year term by the President of Chile upon recommendation by the University Council. He administers the University in accordance with the decisions of that council.

Second in authority is the Secretary General, who also is nominated by the University Council and appointed by the President for a term of 4 years. He coordinates various teaching and other functions and directly administers some of them.

Councils form the governing bodies for State Technical University. One is the University Council, concerned mainly with administrative and economic matters, while the others in charge of academic matters as specified by law, are Teaching Councils (*Consejos Docentes*), whose decisions are approved by the former and which are similar to *facultades* at the University of Chile. State Technical University has four *Consejos Docentes*, one for each of its schools: (1) Electricity, Mechanics, and Construction; (2) Mathematics, Physics, and Chemistry; (3) Mining, Metallurgy, and Industrial Chemistry; (4) Social Sciences and Philosophy. Each Council has a chairman and a secretary elected by the member teachers.

University Schools.[23]—The State Technical University prepares technicians, engineers, and vocational school teachers. The technicians' course is 3 years, the engineering course 6 years, and the vocational

[22] Universidad Técnica del Estado. *Background Information on the Universidad Técnica del Estado.* p. 4–5.
[23] Ibid. p. 15–16.

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teacher-preparation course 4 years. A listing of the schools, by these courses, follows:

Technicians' Course

School and location	*Specialization*
Industrial School (Concepción)	Electricity, mechanics, textiles
Industrial School (Temuco)	Civil construction, mechanics
Industrial School (Valdivia)	Civil construction, shipbuilding
School of Mines (Antofagasta)	Electricity, industrial chemistry, mechanics, mining
School of Mines (Copiapó)	Extraction metallurgy, mining
School of Mines (La Serena)	Civil construction, mining

Engineering Course

School of Engineers—Chemical, Electrical, Mechanical (Santiago)	Electricity, industrial chemistry, metallurgy, mining

Vocational Teacher Preparation Course

Technical Pedagogical Institute (Santiago)	*Teacher preparation in:* Accounting and business practice, advertising, chemistry and marketing of chemicals, decorating, drawing and embroidery, drawing and handwriting, economic history and geography, English, fashions, food and home economics, making of children's clothing, mathematics, physics, Spanish, statistics.

The University also maintains evening courses at the university level to help workers, technicians, and teachers improve their skills in the following specialities: electrical, mechanical, and industrial chemistry techniques; and teacher training for technicians and engineers.

Secondary-level vocational schools operated by the university as annexed schools require elementary school completion for entrance. They follow the Ministry-prescribed curriculum for vocational schools, discussed in chapter 5.

University extension courses provide on-the-job training to augment the number of skilled workers. These courses are given in late afternoon or early evening (*escuelas vespertinas*), at night (*escuelas nocturnas*) and on Sunday. The University has also established an accelerated training program for adult workers, and has received help from

the University of Pittsburgh in the United States in organizing apprenticeship and workers' training courses in industry.

University extension courses in mechanics and electricity has been established in areas as remote as Punta Arenas, which serves as a regional center, not only for courses, but for lectures, inservice training for teachers, and other types of extension activities.

Admission Regulations.—To be admitted to the regular university-level courses, students must have completed the 5-year secondary vocational course and must pass the *bachillerato industrial* in one of four main fields: chemistry, drawing, mathematics, and Spanish, as required by the specialization he intends to pursue. Graduates of the general secondary school who have a *bachillerato* in humanities must take a year's adaptation course before beginning the regular curriculum, but they need not take the *bachillerato industrial.*

University-Industry Relationships.—Through the University Council, where industries are represented, and through the Technical Councils in each of the University schools, which may include local or regional industry representatives, an effort-is made to develop close collaboration between the technical activities of the schools and the needs of industry. Even the Teaching Councils may appoint collaborating members from industry.

Building Program.—Both in Santiago and in the provinces, the State Technical University is carrying on a building program aimed at transforming isolated schools into integrated campuses, thereby eliminating one of the persistent problems that has confronted the University of Chile with its scattered campuses.

Enrollment.[24]—Enrollment statistics for 1962 show a total of 7,970 students in all levels and categories with the following breakdown in descending order:

Total	7,970
Vocational (secondary level)	4,196
Technicians	1,771
Teacher training	1,127
Extension	525
Engineers	351

These data show more than half of the total enrollment in secondary vocational schools annexed to the university. Enrollment in engineering courses tends to be small in comparison with that of other categories. A partial explanation for this, given to the writer by a University official, lies in the attractive job offers which students in some

[24] Universidad Técnica del Estado. *Matrículas Universidad Técnica del Estado en 1962.*

specialities receive before they have completed their education. This points up the drastic shortage of skilled personnel in certain trades.

Titles and Degrees Granted, 1961.[25]—In 1961 the University granted 160 degrees (*licencias industriales*) distributed in the following 10 fields: chemistry, 7; civil construction, 10; electricity, 44; forestry, 2; furniture making, 3; mechanics, 59; metallurgy, 3; mining, 27; naval construction, 1; textiles, 4. A total of 42, having been graduated from the Technical Pedagogical Institute, received the title "State teacher."

Financial Support.—Support for the University comes from appropriations in the national budget, the proceeds from special laws, and its own income. As in the University of Chile, tuition is extremely low.

Problems and Prospects.—The State Technical University, comparatively new, is experiencing the growing pains of a university whose developmental plans are not yet clearly charted. In Chile's parallel educational system, the State Technical University forms the top rung of the vocational educational ladder. Since vocational education tends to aim at lower social and economic groups, it has not had the same level of support as education of the more academic type. This situation is changing in the face of mounting needs for technicians and engineers, but the University still suffers from inadequate resources, an excessive number of part-time staff, and low salaries.

Since many of its activities parallel those of the University of Chile, the need for close collaboration between these two public universities would appear critical as both of them expand their programs in Santiago and in the provinces.

[25] *Año Pedagógico 1961.* p. 86.

8. Higher Education: The Private Universities

THE ENROLLMENT in all five of Chile's private universities does not equal that of the University of Chile. The two largest ones are Roman Catholic universities; the others have no religious affiliation. All of them are officially recognized by and receive support form the State. Each will be discussed in this chapter.

Pontifical Catholic University of Chile

Located at Santiago and founded in 1888, Pontifical Catholic University of Chile (*Pontificia Universidad Católica de Chile*) that year had two *facultades*—Law and Mathematics—and 50 students. In 1963 it had 8 *facultades* and 16 schools. Its 1961 enrollment totaled 3,763 students.

Administration and Financial Support.—Government of Pontificial Catholic University is in the hands of a Rector and a Council, which includes the Secretary General, the Assistant Rector, and the deans of the *facultades*.

Financial support comes from Government subsidies, private contributions, and the university's own resources.

Admission Requirements.[1]—Selection of studonts is based on secondary-school marks, the score on the *bachillerato examination*, an admission examination covering general knowledge and general and religious culture, and a personal interview. The Schools of Architecture, Economics, Psychology, and Sociology use also a test of general intelligence and reasoning ability.

[1] Erika Grassau and Egidio Orellana B. *Admission to Higher Education in Chile.* p. 42.

1961 Enrollment.[2]—The university's 1961 enrollment by *facultad* and school appears below:

Facultad	*School*	*Number of students*	*Percent of total number*
Total		3,763	100.0
Agronomy	Agronomy	236	6.3
Architecture	Architecture	200	5.3
	Art	80	2.1
Juridical, Political, and Social sciences.	Law	563	15.3
	Social Service	60	1.6
Medicine and Biological Science.	Medicine	179	4.7
	Nursing	61	1.6
Philosophy and the Sciences of Education.	Education	------	-------
	Department of:		
	Biology and Chemistry	216	5.7
	English	183	4.9
	French	142	3.8
	German	34	0.9
	History and Geography	139	3.7
	Mathematics	104	2.8
	Plastic Arts	50	1.3
	Philosophy	102	2.7
	Spanish	170	4.5
	Journalism	33	0.9
	Psychology	130	3.5
Technology	Chemistry	145	3.9
	Civil Construction	130	3.5
	Electrical Engineering	76	2.0

The largest enrollments were found in the Schools of Education (30.3 percent), Law (15 percent), and Engineering (10.5 percent).

In 1961 Pontifical Catholic University conferred 273 titles, the majority of them in 3 fields: Agronomy, Education, and Law. Courses vary in length from 4 to 7 years, the latter being the length of the medical course. Most titles require 5 years.

The University Campus.—Pontifical Catholic University does not have a single campus, but a large number of its schools are located in a compact area and the rest are easily accessible. Plans are underway to build a new university city away from the congestion and traffic of the University's present location near the center of the capital. The University has no branches outside Santiago except the Rural Normal School for Men in Talca. Apparently, the main concern is carrying forward its present plans for an integrated campus.

[2] *Año Pedagógico 1961.* p. 91.

New Developments.—In the area of new developments, one can point out the following:

- A new 4-year School of Journalism inaugurated in 1961.
- A new Rural Normal School for Men established at Talca in 1961.
- An agreement with the Universities of Chicago and Cuyo (Argentina) to develop the latter's Faculty of Economics.
- A program of basic science institutes aimed at upgrading instruction in biology, chemistry, mathematics, and physics.
- Continued improvements in the School of Engineering through increasing the number of full-time staff, raising salaries, reducing the staff's student-contact hours, and stimulating research.

In its curriculum and organization, the Pontifical Catholic University of Chile tends to follow the guidelines of the University of Chile because of the latter's traditional control in granting degrees and titles, but the former has greater freedom to make changes.

Catholic University of Valparaíso [3]

Catholic University of Valparaíso (*Universidad Católica de Valparaíso*) was founded in 1928 with a single *Facultad* of Physical and Applied Sciences and four technical schools. Financial support during its early years was uncertain, and from 1932 to 1936 all university courses were suspended. The major development came after 1951, when 11 new schools were created and enrollment tripled. In 1962, the University had 21 schools grouped in five *Facultades*, and a technical institute. The administrative organization resembles that of Pontifical Catholic University of Chile, the Rector being designated by extra-university authorities. A branch of Catholic University of Valparaíso called *Universidad del Norte* has been established in Antofagasta, the center of northern Chile's mining activities.

The university's 1962 enrollment by *facultad* and sex was the following:

Facultad	*Total*	*Men*	*Women*
Percent	100	72	28
Total	2,458	1,779	679
Architecture and urban development	147	138	9
Commerce and economic sciences	305	266	39
Juridical and social sciences	368	243	125
Philosophy and education	778	286	492
Physical sciences and mathematics	100	95	5
Technical institutes	760	751	9

[3] Universidad Católica de Valparaíso, Centro de Documentación Pedagógica. *Boletín No. 5–6.* p. 96.

Two Facultades.—Philosophy and Education and the Technical Institute have more than half of all the enrollment. Courses of study vary in length from 4 to 6 years depending on the specialization.

Research Institutes.—Eight *Institutos de Investigación*, all created since 1952, operate in the following fields:

- American art
- Archeology
- Architecture and urban development
- Ecclesiastical history
- Economics research
- Legal practices
- Pedagogical documentation
- Scientific and technological research

Student Services.—Several departments are concerned with student welfare. The University maintains two boarding houses and provides scholarships and loans, as well as medical, dental, and welfare services. A Department of Physical Education and Sports was created in 1960.

Cultural Extension.—University extension activities include choir, exhibitions, lectures, orchestras, religious classes for laymen, and training courses for workers. In 1959 the University inaugurated educational and cultural television in the country's first TV station of any kind.

Public Services.—Public services include use of the library, preparation of *bachillerato* examinations since 1956, agreements with State and private enterprises for applied research, and establishment of a Pilot Plant for Industrial Fish Processing. The latter is intended to stimulate the growth of an industry with immense potential because of the country's long coastline.

Other Educational Activities.—Several annexes or dependencies of the University are tied administratively and financially into the University complex, although they are not integral parts of the University in the same sense as *facultades*. Among the annexes are the following:

- A summer school, organized by the *Facultad* of Philosophy and Education.
- Schools and university institutes (at Antofagasta) which began operation in 1957 and had 381 students in 1962.
- The Institute of *Educadores Familiares* (family life educators).
- Two free secondary schools (*liceos gratuitos*); one, a night school; the other, a day school with an experimental program.
- A secondary school for girls organized by the *Facultad* of Philosophy and Education in 1960.

Growth.—Catholic University of Valparaíso has experienced a marked growth since 1951. From 1951 to 1961 it graduated 1,319 from its various schools, and total enrollment increased from 763 to 2,334. Prospects for the future are difficult to predict. Among the

many activities carried on by the University, no activity stands out as either distinctive, unique, or clearly indicative of the University's future role in higher education.

University of Concepcion

Founded in 1919 as a private institution, the University of Concepción (*Universidad de Concepción*) is still private, although probably as much as 90 percent of its funds comes from Government sources, mainly the national lottery. Located in Concepción, Chile's third largest city, the University is the major educational and cultural center for the southern zone, or region, of Chile. From a small, struggling institution of four schools (Dentistry, Education, Industrial Chemistry, and Pharmacy) in 1919, it had grown by 1962 into a large but compact university complex with a dozen schools and four central institutes, and 3,119 [4] students.

The 1962 enrollment by school (or institute) is shown below: [5]

School or institute	*Number of students*
Total	3,119
School of—	
Agronomy	136
Chemistry and Pharmacy	260
Dentistry	268
Education	640
Engineering	342
Journalism	40
Law	428
Medicine	446
Nursing	116
Political and Administrative Sciences	12
Polytechnics	243
Social Service	91
Institute of—	
Biology	61
Chemistry	27
Mathematics	3
Physics	6

Education accounts for the largest number of enrollees, followed by medicine and law. Most courses are of 5 years' duration with

[4] Universidad de Concepción. *Memoria*, 1962. p. 7.
[5] Ibid.

some variations. Medicine requires 7 years, engineering 6, and the normal school course in Los Angeles, 1 year. Male students outnumber females about six to four.

Admission Requirements.[6]—The *bachillerato* is required by the Schools of Agronomy, Chemical Engineering, Economics, and Education. The Schools of Chemistry and Pharmacy, Dentistry, and Medicine consider, in addition to the *bachillerato* score, average school marks, the score on an examination covering general culture and knowledge of the basic sciences, and a personal interview.

Degrees and Titles Conferred.—The following degrees and titles were conferred in 1961:[7]

Degree or Title	*Number*
Total	132
Agronomist	7
Chemical Engineer	14
Journalist	2
Licenciado in juridical and social sciences	15
Licenciado in medicine	37
Pharmaceutical chemist	24
State Teacher	17
Surveyor	33
University Nurse	13

Central Institutes of Basic Sciences.—One of the major emphases of the University of Concepción has been the reorganization of the basic science courses into four central institutes—biology, chemistry, mathematics, and physics. This plan was approved in 1958 by the Tenth General Conference of UNESCO as a pilot project for all higher education institutions in the Western Hemisphere. The project also has been supported by a Ford Foundation grant of $500,000. The four institutes provide the basic science courses for the professional schools as well as prepare science majors. Although the institutes are mainly teaching centers, research in the basic sciences is being encouraged. Staff members—many of them with degrees earned in foreign countries—are scientists employed on a full-time basis with reduced teaching loads to allow time for research. In 1962 fewer than 100 students were enrolled in the institutes as potential majors in one of the sciences, a program requiring 4 years and a fifth year for a research thesis; the rest of the students were in the professional schools.

All Chilean universities are exerting great efforts toward the improvement of the teaching of sciences, long a neglected area; but

[6] Erika Grassau and Egidio Orellana B. *Admission to Higher Education in Chile*, p. 42.
[7] *Año Pedagógico* 1961. p. 88.

they have found that the typical university organization of quasi-independent professional schools a formidable obstacle in achieving positive results. With its basic science institutes, the University of Concepción has pioneered in this area of critical need. If these institutes prove successful, they may well serve as a model for other universities, not only in Chile, but in other parts of Latin America. The compactness of the University of Concepción campus gives it an advantage over other universities with their widely dispersed schools.

Development of the School of Engineering.—Along with the basic science program, a second emphasis of the University of Concepción is strengthening the engineering program. A grant of more than $1 million from the Special Fund of the United Nations has been designated for this purpose. The University of Concepción will contribute the equivalent of $833,571 in construction services, equipment, and costs of operation.[8] The project has the following aims:

- Diversify engineering instruction with the creation of new specializations. (Electrical, electronic, and metallurgy specializations have been added to the previously existing chemical engineering and mechanical engineering specializations.)
- Promote the training of middle-level technicians in the Polytechnical School.
- Promote better consulting services to private industrial enterprises of the zone and the country through the Institute of Technological Research.

School of Agronomy.—The School of Agronomy at Chillán in 1962 received a grant of $85,000 from the Rockefeller Foundation for machinery and laboratories. This grant should help stimulate enrollment in the School of Agronomy (154 in 1962) and help develop better agricultural practices in the surrounding countryside, where farming is the major industry but falls far short of maximum productivity.

Prospects for the Future.—The University of Concepción's prospects for the future appear bright. Its location as the major institution serving the southern part of Chile lends it strategic importance. Moreover, Concepción is the center of an industrial region with immense potential for growth. Here are found 85 percent of the coal deposits, the country's only steel mill, vast hydroelectric resources, and suitable ports. Nearby are extensive forests and a thriving agricultural region. All these factors help explain the University's emphasis on basic sciences and engineering as it attempts to lead the industrial development of the zone.

[8] *Memoria*, 1962. op. cit., p. 11.

The campus of the University of Concepción would appear to be one of its prime advantages. It is compact, convenient, and concentrated. Its buildings are modern and functional, although many suffered severe damage in the disastrous earthquakes of 1960, a catastrophe from which neither the University nor the zone it serves has fully recovered.

Federico Santa María Technical University

The purpose behind the bequest of Federico Santa María, who left his fortune to establish *Universidad Técnica "Federico Santa María"* as an educational institution different from any such institution then existing in Chile, was to provide opportunities for youths of humble circumstances to continue their studies and arrive at the highest level which their intellectual capacities would permit. He asked merely that in return for a free education these youths would use their knowledge and culture for the benefit of their country and similar nations.

Federico Santa María died in 1925, leaving to the creative genius of Agustín Edwards the task of transforming his desires into reality. Agustín Edwards, former Chilean Minister to Great Britain, became head of Federico Santa María Foundation formed in 1926, made a study of outstanding technical schools in the United States and Europe, and decided to found the new school after a German model. He imported experts from Germany, Switzerland, and Italy to prepare the curricula and design the shops and laboratories. These men became part of the staff when the school was inaugurated in 1931, and Agustín Edwards became its first president. According to the terms of the founder's will, the technical faculty for the first decade was restricted to foreigners.

Administration and Financial Support.—The University is governed by a board controlled mainly by descendents of the original trustees. Financial support comes from the original endowment and government sources. Assistance is also sought from private industry.

Organization.—Federico Santa María Technical University actually is a combination secondary vocational school and university. It operates a vocational school at the secondary level, gives university-level courses for technicians and engineers, provides a night school for training semiskilled workers, and assists private industry in establishing trade schools.

Enrollment in the University Schools.—The enrollment in each of the six specializations taught in university-level schools is given below by year:[9]

		Year						
		Technical level				Engineering level		
Specialty	*Total*	*1*	*2*	*3*	*4*	*4*	*5*	*6*
Total	274	54	60	60	14	39	25	22
Chemistry	61	21	8	10	1	11	6	4
Construction	20	8	5	3	4	----	----	-----
Decorating	11	4	5	1	1	----	----	-----
Electricity	76	2	21	18	4	14	8	9
Mechanics	99	15	18	28	4	14	11	9
Woods and plastics	7	4	3	----	----	----	----	-----

At the engineering level students numbered 86 out of a total of 274. In 1961, the School of Arts and Trades, a secondary-level vocational school had 271 students in the regular day school and 154 in the night school.[10]

Titles Conferred in 1961.—In 1961 the university conferred 27 titles: 3 civil engineers, 3 decorators (*decoradores*), 14 engineers, and 7 technicians.[11]

New Developments.—A School for Graduates in Chemical Engineering began functioning in 1960 with assistance from U.S. foreign-aid funds and a cooperative relationship with the University of Pittsburgh, which furnished professors to organize the curriculum and to teach some specialized classes. Doctor's degrees offered by the University after a 2-year course were expected to be equivalent to those offered by the University of Pittsburgh. In 1962 graduate work was also begun in electrical engineering.

Another innovation is the establishment of satellite schools as dependencies of the School of Arts and Trades. These are to provide on-the-job training in the skills needed by workers at a particular plant. Satellite schools are considered a means of enlisting greater support from private industry, which furnishes the buildings, the equipment, and the costs of operation; while the University contributes technical guidance and supervision.

Prospects for the Future.—Although small, the university performs a unique role in vocational and higher education by offering talented youths who could not otherwise continue their education free board, clothes, and tuition. Santa María has the advantages of an attractive campus, a full-time staff, and full-time students; but from the stand-

[9] *Año Pedagógico 1961.* p. 89.
[10] Ibid.
[11] Ibid. p. 90.

point of faculty research, the number of teaching and student-contact hours is so high, however, that it leaves the faculty with insufficient time to pursue such a professional activity. Because of heavy operating costs, the university will no doubt continue to have a small enrollment.

Southern University of Chile

The youngest and smallest of Chile's universities is Southern University of Chile (*Universidad Austral de Chile*), which began operations in 1955 with three *Facultades*—Agronomy, Forestry, and Veterinary Medicine—and 30 students. Located at Valdivia in the southern part of Chile (where agriculture, forestry, and livestock raising are the principal industries), the university was established to serve the particular needs of the region, as indicated by the three original *facultades*. By 1962 the institution had grown to include six *facultades* with an enrollment of 424.

Administration.[12]—According to statutes governing the University, its administration is the responsibility of a Board of Directors of 10 members elected by active members of the Corporation, the President, the Vice-President, the General Treasurer, the General Secretary of the University, and the Directors of the separate Schools composing the University. Members of the Board are elected for 3-year terms. Except for the General Secretary and the General Treasurer, employees of the University cannot be elected to the Board.

The University Council has control over academic matters. It is composed of the President, the Vice-President, the Secretary General, the Directors of University Schools, and three delegates designated by the Board of Directors.

The President of the Corporation, who is also Rector of the University, is elected for a term of 6 years in an open meeting of the *Junta General Extraordinaria* (Extraordinary General Committee) of members, the Board of Directors, the University Council, and designated professors. The President presides over meetings of the Board, the University Council, and the General Committee of Members.

Financial Support.—Like all other Chilean private universities, Southern University of Chile receives a large subvention from the State. In 1962 over 90 percent of its income of 1,334,550 *escudos* was

[12] Ministerio de Justicia. *Decreto Supremo Que Concede Personalidad Jurídica y Aprueba los Estatutos de la Universidad Austral de Chile.*

derived from Government sources, the most important being a share in the national lottery.[13]

Since the earthquakes of 1960, the University has been engaged in a rebuilding program with the aid of nearly $750,000 from the United States.

The financial condition of the University can only be described as poor. Salaries for professors are low by any standard. It is unfortunate that much of the University's resources has had to be channeled into reconstruction rather than development and expansion.

The 1961 enrollment by *facultad* was as follows: [14]

Facultad	*Number*
Total	414
Agricultural sciences	14
Fine arts	34
Forestry engineering	17
General studies	159
Philosophy and education	170
Veterinary medicine	20

Teacher preparation accounted for the largest single group, which included 76 students in the 2-year experimental normal course for elementary teachers. The rest were preparing to be secondary teachers in biology and chemistry, physics and mathematics, and Spanish.

Innovations in Higher Education.—Since Southern University of Chile is relatively new, it is not encumbered by deeply ingrained traditions which resist change. It has been able to experiment and to challenge some of the time-honored practices of Latin American universities.

One of the University's innovations is the *Facultad* of General Studies, which resembles the lower division of an American liberal arts college. In this *Facultad*, students pursue for 2 years a curriculum of general studies, embracing humanities, languages, mathematics, and sciences before they embark on their specializations in the professional schools. Students may even major in general studies.

A second innovation is that of giving more responsibility to the students for their own learning. Typically, the normal class-hour load of Chilean university students far exceeds that of university students in the United States. Southern University of Chile has allowed students more time for independent study in libraries and laboratories.

[13] Universidad Austral de Chile. *Situación y Necesidades Inmediatas de la Universidad Austral de Chile.*

[14] *Año Pedagógico 1961.* p. 96.

Another development is that of low-cost faculty housing, designed to compensate for the low salaries as a means of attracting promising faculty members.

Special Problems.—Besides its modest resources and its problems of reconstruction, Southern University of Chile faces other obstacles. Among these are its relationships to other institutions, particularly the University of Chile, which by law exercises control over curriculum, and degrees, and titles of newly established universities. Since the university is challenging some of the prevailing concepts of higher education, other more traditional institutions are likely to view these "reforms" with skepticism. Its modest size and isolation will naturally limit the university's national influence, but its efforts to develop a program keenly responsive to regional needs represent a significant and unique contribution.

9. The Teaching Profession

IT IS AXIOMATIC that no educational system can be better than the teachers who serve in it. Their ability and performance are more indicative of the quality of education than budgets, buildings, materials, or any other single factor. This chapter concerns Chile's teachers—their preparation, their working conditions, and their problems.

Number and Qualifications of Teachers

The Number of Teachers.—Table 8 shows the 1962 distribution of teachers by level and sex in public and private schools. Exclusive of the teachers in private general secondary schools, about whom no data were available, elementary teachers accounted for more than 70 per-

Table 8.—Number of teachers in public and private pre-elementary, elementary, and secondary schools, by sex; and breakdown of figures for the secondary schools, by type of school: 1962

[—indicates no data given in the source]

Level or type of school	Total	Public schools			Private schools		
		Total	Men	Women	Total	Men	Women
Total, all levels	**45,412**	**37,084**	**13,712**	**23,372**	**8,378**	**2,690**	**5,688**
Pre-elementary	1,153	851	6	845	302	—	302
Elementary	32,100	26,017	8,212	17,805	6,083	1,565	4,518
Secondary	12,209	10,216	5,494	4,722	1,993	1,125	868
SECONDARY							
Agricultural	440	252	232	20	188	144	44
Commercial	2,154	1,498	918	580	656	354	302
General	5,195	5,195	2,406	2,789	—	—	—
Industrial	3,790	2,727	1,629	1,098	1,063	595	468
Normal school	630	544	309	235	86	32	54

SOURCE OF DATA: Ministerio de Educación Pública. *Informe de Chile.* Table 4 (ch. 13, following p. 9).

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Table 9.—Number of teachers with and without degrees or titles in public and private elementary and secondary schools; and breakdown of figures for the secondary schools, by type of school: 1962

[—indicates no data given in source]

Level or type of school	Total teachers	Public schools			Private schools		
		Total teachers	With titles	Without titles	Total teachers	With titles	Without titles
Total, all teachers on both levels	**44,309**	**33,233**	**23,733**	**12,503**	**8,076**	**1,888**	**6,188**
Elementary	32,100	26,017	17,964	8,053	6,083	717	5,366
Secondary	12,209	10,216	5,769	4,447	1,993	1,171	822
SECONDARY							
Agricultural	440	252	190	62	188	125	63
Commercial	2,154	1,498	921	577	656	220	436
General	5,195	5,195	2,643	2,552	—	—	—
Industrial	3,790	2,727	1,543	1,184	1,063	753	310
Normal	630	544	472	72	86	73	13

SOURCE OF DATA: *Ministerio de Educación Pública. Informe de Chile.* Table 7 (ch. 13, following p. 9)

cent of the total in 1962. Public school teachers outnumbered private school teachers in every level and every category. Women outnumbered men more than two to one at the elementary level. Proportionally, the number of men was greater at the secondary level, but insufficient to avoid frequent criticisms of excessive feminism in the teaching force.

Teachers Without Titles.—A chronic problem is the large number of teachers without an official degree or title, regarded as a standard qualification. Table 9 shows the situation in 1962.

Teachers in public schools have a greater proportion of their numbers with titles than do teachers in private schools. At the elementary level less than 15 percent of the private school teachers hold titles as opposed to nearly 70 percent of the public school teachers. At the secondary level over half of both public and private teachers hold titles.

Teacher Preparation

Preschool Level.—Teachers for the preschool level are prepared at Normal School No. 2 in Santiago, the Rural Normal in Angol, or the

School for Teachers of Preschool Children (*Escuela de Educadoras de Párvulos*) which is a dependency of the University of Chile. Entrance to the training program in the two normal schools requires graduation from the secondary school *humanidades* course, while the School for Teachers of Preschool Children of the University of Chile requires, in addition, the *bachillerato*. The course of study in the former is 2 years, leading to the title *professor de educación primaria párvularia* (preschool teacher); in the latter, the course of study is 3 years, leading to the title *educadora de pávulos* (teacher of preschool children).

Elementary Level.—Elementary teachers are prepared in public normal schools, private normal schools, the normal school course of the University Regional College at Temuco, normal schools of Pontifical Catholic University, the normal school of the University of Concepción, and the experimental normal school at Osorno, a dependency of the Southern University of Chile.

The course of study in the regular normal schools is 6 years for those students who have completed the elementary school and also for those who have completed 1 or 2 years of the *humanidades*. For graduates of the secondary school, the course is 2 years. The normal school course offered in universities is also 2 years for secondary school graduates. All of these courses lead to the title *profesor de educación primaria*.

Most elementary teachers are prepared in one of the 14 public normal schools, of which 7 are urban and 7 rural. Thirteen of these are classified as common (*común*), and one, *Escuela Normal "José Abelardo Nuñez,"* is called a "superior" normal since it prepares not only teachers, but also administrative staff, for elementary and normal schools.

Public normal schools are for the most part boarding schools, offering free tuition, room and board, and medical attention. A system of *medio pupilaje* (day boarding) is also available. To be admitted to a public normal, a student must have finished the 6-year elementary school. The number of students to be admitted is determined for each year, and candidates are selected on the basis of tests covering general knowledge, mental maturity, musical aptitude, and personality. Students who are selected must agree to teach in public schools for a stated number of years in return for a free education. Since salaries for elementary teachers are low, it is widely believed that

normal school applicants tend to come from low socioeconomic classes and that teaching is a vehicle of upward social mobility for women from these groups.[1] One research study does not support this view, but concludes that it is such a vehicle for women from somewhat higher classes.[2]

The course of study for the public normals is 6 years divided into two cycles of 4 years and 2 years, respectively. The 4-year cycle synthesizes the 6-year general education program of the secondary school, and the 2-year cycle is devoted to professional education. Altogether, a normal school graduate has 6 years of education beyond the elementary school or the equivalency in years of a secondary education. For this reason, normal school education is classified in the broad category of secondary education or *educación media* (middle education).

The curriculum of general education in the first 4 years, which resembles that of the *liceo*, includes courses in each of the following six categories: artistic, physical, scientific, and technical education; religion and ethics; and foreign languages. Rural normal schools incorporate elements or agricultural education in their general education program but otherwise follow the same curricular structure as the *liceos*.

Professional education, which encompasses the last 2 years, is divided into two main categories, auxiliary sciences and philosophy and pedagogy. Practice teaching is done in the *escuela de aplicación* (practice school) attached to each normal. A total of 40 to 42 hours weekly is devoted to classes and complementary activities in each year of the normal school's 6 years, resulting in a heavy load for both students and staff.

When he has satisfactorily completed the normal school course, the student receives his license to teach as a provisional teacher (*interino*) until he receives his official title of *profesor de educación primaria urbana* or *profesor de educación primaria rural*, depending on the type of normal school attended. His title is awarded only after a year of successful teaching and approval of his final report.

Selected facts about the 14 public normal schools (boarding and day boarding) are set forth below:

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[1] K. H. Silvert and Frank Bonilla. *La Educación y el Significado Social del Desarrollo.* p. 79–80.
[2] Ibid. p. 122.

Name and location	*Provinces served*
FOR MEN	
Rural Normal Experimental for men, Victoria	Arauco, Bío-Bío, Cautín, Malleco
Rural Normal for Men, Copiapó	Antaca..a, Coquimbo
Rural Normal for Men, Chillán	Concepción, L:nares, Maule, Ñuble
Rural Normal for Men, Valdivia	Aysén, Chiloé, Llanquihue, Magallanes, Osorno, Valdivia
Urban Normal for Men [1], Viña del Mar	Aconcagua, Valparaíso
Urban Normal for Men "José Abelardo Nuñez".	O'Higgins, Santiago
FOR WOMEN	
Rural Normal for Women, Ancud	Aysén, Chiloé, Llanquihue, Magallines, Osorno, Valdivia
Urban Normal for Women, La Serena	Aconcaqua, Atacama, Coquimbo
Urban Normal No. 1 for Women, Santiago	Colchagua, O'Higgins, Santiago, Valparaíso
Urban Normal No. 2 for Women [1], Santiago	O'Higgins, Santiago
COEDUCATIONAL	
Rural Normal Experimental [2], Angol	Arauco, Bío-Bío, Cautín, Concepción, Malleco, Valdivia
Urban Normal, Antofagasta	Antofagasta, Tarapacá

[1] Day boarding.
[2] Boarding facilities for women.

Data for 1962 give the following information concerning the 14 public normals: [3]

Students	5,531
Professors	497
Graduates	1,419
Teachers in improvement courses	1,645

Two outstanding developments occurred in 1962: [4] (1) The Ministry of Education and UNICEF signed a contract to integrate health and sanitation education in the normal schools. As a result, normal schools were to receive modern biological laboratories and audiovisual equip-

[3] Ibid. p. C 3–18.
[4] Ibid.

ment; and five motor vehicles, one for each of five normal schools, were to be delivered for use in extension work. (2) A new agreement was signed extending the Experimental plan of Rural Education of Victoria to the province of Nuble. Supported by funds from the Rockefeller Foundation, this plan had as its main objectives to experiment in rural school construction and to develop rural education. The plan has been successful in both objectives.

Three private normal schools had a total 1962 enrollment of 1,166 students, or slightly more than on-sixth of all normal school enrollment.[5]

Normal school courses established in connection with universities also contribute to the supply of elementary teachers, but the number from this source is small compared with that from the regular normal schools.

The normal schools as presently organized have become the targets of considerable criticism, with numerous suggestions for reform.[6] Critics have pointed to the inadequacy of the training program, which is on a secondary level. They question the soundness of a professional commitment made at the age of 13 when students begin their normal school training, having just finished the elementary school. They also question their maturity and readiness for professional training at this age. They doubt the advisability of isolating prospective teachers in a specialized program where they have no contact with students pursuing different professional goals. Other criticisms concern the costs of providing free board, room, and education; and the lack of normal school articulation with other levels and types of education.

One recent proposal was to extend the cycle of general education from 4 to 6 years and the professional cycle from 2 to 3. This would result in better articulation with the secondary school program and would increase the total preparatory program from 6 to 9 years. It is likely that any thoroughgoing change of the normal schools will have to await the outcomes of the study of a national planning commission, which is investigating the entire educational structure. The work of this commission is discussed in chapter 12.

General Secondary Schools.—Secondary teachers for the *liceos* receive their preparation in the following institutions:

- Institute of Physical Education of the University of Chile (for teachers of physical education and for family life educators).
- National Conservatory of Music of the University of Chile.

[5] Ministerio de Educación Pública, Dirección de Educación Primaria y Normal. *Datos para el Informe Nacional a IIIª Reunión Interamericana de Ministros de Educación.* p. 2.

[6] For a discussion of the deficiencies of the present system and suggested improvements, see p. 166–67, of *La Racionalización de Nuestra Enseñanza,* by Julio Vega.

- Pedagogical institutes of the University of Chile at Antofagasta, Santiago, and Valparaíso.
- School of Applied Arts of the University of Chile.
- School of Fine Arts of the University of Chile.
- University schools of pedagogy recognized by the State (at all the universities except the Federico Santa María Technical University).

These institutions select students on the basis of their standing in the *bachillerato* examination, marks in the second cycle of secondary school, and (in some instances) marks on entrance examinations.

The pedagogical institutes and the university schools of pedagogy require 5 years of studies and the other institutions 4 years. After completing the required studies, a graduate received the title of *profesor de estado* (State teachers) in his particular speciality.

In 1961 a major reform in the *Facultad* of Philosophy and Education affected the *Instituto Pedagógico* and other professional schools of the *Facultad:* it separated the academic studies from the professional studies. Three central departments—mathematical and natural sciences, philosophy and letters, and social sciences—were created to handle the academic courses. The *Instituto Pedagógico* and other professional schools were restricted to offering purely professional courses. The reform was intended to strengthen the academic background of students to pursue further studies, whether academic or professional. At the same time, it also reduced the control of the professional schools over the total program of teacher preparation and created a problem of co-ordination between them and the central departments.

Secondary Vocational Schools.—Vocational school teachers are prepared in the Technical Pedagogical Institute of the State Technical University. The course of study is 4 years, leading to the title of State teacher in some area of specialization. Teacher preparation is not restricted to the technical fields, but includes specializations in academic subjects taught in the vocational schools. In preparing teachers in the academic areas, the Technical Pedagogical Institute obviously duplicates the work of the *Instituto Pedagógico* of the University of Chile and that of other university schools of education. In 1962 more than 1,100 students were enrolled in the teacher-preparation program.[7]

Students in the Technical Pedagogical Institute come from the ranks of graduates of *liceos*, secondary vocational schools, and normal

[7] Universidad Técnica del Estado. *Matrículas Universidad Ténica del Estado en 1962.*

schools. The *bachillerato industrial* certificate is required for admission.

University Teachers.—For the university level, no special program of teacher preparation exists. No centers have been established for that express purpose although the beginnings of graduate education in several fields should augment the supply of potential university teachers. The requirements for university appointments vary from *facultad* to *facultad* and from one school to another. Candidates for teaching positions are selected on the basis of their professional qualifications and their special preparation for a particular vacancy.

The Teacher in Service

Public school teachers are subject to the general legal requirements governing all public employees and to special laws pertaining specifically to the teaching profession. These legal requirements are consolidated in a publication called *Estatuto Administrativo* [8] (Administrative Statute), which delineates the basic laws and their modifications in force in 1963. Title VI of the Administrative Statute contains the legal standards for the teaching profession and describes the system of classifications, nominations, and promotions of teaching personnel at various levels. In keeping with the centralized character of educational administration, the Ministry of Education through the various directorates controls the appointments and advancement of public school teachers wherever they serve. Needless to say, this represents a concentration of power in a central bureaucratic organization and frequently inspires criticisms that political considerations often override professional qualifications in the management of personnel.

Classification of Personnel.—Personnel employed in any of the dependencies of the Ministry of Education are classified in five categories:

Administrative	Minor services
Auxiliary (in shops and laboratories)	Special
	Teaching

Teaching personnel are divided into two categories: those who have directive functions and those who are classroom teachers.

Qualifications for Appointment.—To receive a regular appointment to discharge teaching functions in any of the public schools, teachers must possess titles conferred by the Ministry of Education, the University

[8] *Estatuto Administrativo.*

of Chile, the State Technical University, or any of the other universities, recognized by the State, as follows:

Level	*Title*
Preschool	*Normalista* (normal school graduate) or *profesor parvulario* (teacher of preschool children)
Elementary	*Normalista*
Normal school	*Normalista* or *profesor de estado* (State teachers)
Secondary (general)	*Profesor de estado* conferred by the University of Chile or one of the universities recognized by the State in the teaching subject
Vocational	For teaching or directive functions: *Profesor de estado ingeniero* (engineer), *technico* (technician) conferred by the Ministry or by recognized universities
	For the position of *profesor-ayudante* (teaching assistant), a vocational school graduate may be employed if he received a rating of at least "good" on his school marks.

In case of inability to find teachers who possess the required qualifications, the law specifies the order of preference according to which candidates will be appointed on a provisional basis. Provisional teachers remain in their positions indefinitely until it is deemed advisable to name teachers with titles in their places. Provisional teachers may also be named as regular teachers when they obtain their titles or otherwise fulfill the requirements.

Teachers seeking appointments in the public elementary schools in the Department of Santiago or in cities of more than 60,000 population must serve at least 3 years in the provincial public schools. This restriction does not apply to the three graduates of normal schools each year who have achieved the highest averages. Secondary teachers must also teach in the provinces for 3 years before receiving a regular appointment in the Department of Santiago. The sharp contrasts between urban and rural living in Chile cause teachers to prefer the urban centers. Restrictions on employment in urban schools are designed to augment the supply of teachers for the provinces.

The System of Categories.—Each of the three branches of the educational system specifies certain categories through which a teacher may advance. For elementary and normal school teachers there are seven. All teachers begin in the seventh category, where they must serve at least 5 years before advancement to the next. To advance to positions of the first category, which includes Chiefs of Departments, Visitors,

and Directors of the Superior Normal School, a teacher must have the title of *normalista* or *profesor de estado* and 15 years of effective service. He must also prove his competency for the position.

For public secondary and vocational school teachers there are six categories. To achieve the first category, a teacher must have a title and 15 years of service in that particular branch of education. Since the positions at the top levels are extremely limited in number, candidates face rigorous competition.

Hours of Work.—The number of hours of work per week is specified by law. For elementary teachers in public schools the work week is 30 hours. For secondary teachers the normal work week is 36 hours, with some reduction permitted if the teacher is employed in experimental schools or if he serves as *profesor jefe* (head teacher) of a subject. The maximum number of hours per week a teacher may work in public and private schools is 42.

Salaries and Other Benefits.—Salaries for teachers at all levels have have been low in relation to salaries of other professional people. Teachers have frequently resorted to extreme measures, including strikes, to obtain salary advances. In periods of inflation, such as those Chile has experienced since World War II, teachers' salaries have been subject to frequent readjustments and any data presented here will undoubtedly be rendered obsolete by subsequent revisions. A law passed in January 1962 readjusted teachers' salaries retroactively to October 1, 1961, and brought them to the following levels:[9]

	Salary in escudos	
Teaching and salary levels	*Without title*	*With title*
Elementary:		
Minimum	1, 024. 10	1, 094. 41
Maximum	2, 365. 44	2, 534. 18
Secondary:		
Minimum	1, 774. 56	4, 166. 54
Maximum	4, 166. 54	4, 469. 93

From the figures given above, one notes the rather small difference between the salaries of teachers with titles and those of teachers without titles. Also evident is the substantial salary differential between elementary and secondary teachers. Because of the escudo's fluctuation during recent years, it is difficult to generalize about the meaning of salaries in terms of dollars. Some idea of their level can be gleaned from the fact that the salary of a beginning elementary teacher in 1963 was less than $30 per month.

[9] Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 52.

Although beginning salaries are low, a system of salary increases for each 3 years of service in public schools rewards those who make a career of teaching. Those increases (called *trienios*) are based on a percentage of the base salary. A law passed April 6, 1960, established the following scale:

Years of service	*Percentage increase*	*Years of service*	*Percentage increase*
3	40	18	105
6	50	21	115
9	60	24	130
12	75	27	140
15	90		

Since the majority of teachers do not advance above the lowest category in which they were appointed, the system of *trienios* based on compensation for years of service and providing rewards without the need for change in status has been a long-established principle.

Trienios are also used as an incentive for normal school students. Each year the three graduates with the highest marks in each public normal school receive, when they start teaching, a bonus or *trienia* equivalent to the increase normally received after 3 years of service. This incentive is not available to graduates of teacher-preparation programs for the secondary schools.

Although salaries are low, teachers enjoy certain benefits which may compensate in part for this situation. These benefits include family allowances, sick leave, health insurance, maternity leave, and liberal retirement payments, which can be readjusted to reflect salary increases granted teachers still in service. Chile has long been a pioneer in social insurance programs that have included public employees. These have provided teachers with an economic security greater than their meager salaries would indicate.

Inservice Education for Teachers.—With so many teachers without titles, the matter of inservice education assumes great importance. Each of the directorates of the Ministry of Education provides programs for inservice education of teachers. Universities also offer summer and extension programs aimed at teachers' specific needs.

By far the most extensive program is that offered by the Directorate of Elementary and Normal Education. Mainly through the facilities of the *Superior Normal "José Abelardo Nuñez,"* 1,645 teachers received inservice education in 1962.[10] The program included courses for specialists in experimental schools, courses to prepare directors of elementary schools of the first class, and courses of a pedagogical, technical, or cultural nature. Correspondence courses were also of-

[10] Data from the Directorate of Elementary and Normal Education.

fered, and plans were underway in 1963 to establish an evening normal school for workers who had finished the secondary school.

Secondary teachers can choose from numerous offerings of universities which prepare secondary teachers courses that suit their peculiar needs, although systematic postgraduate training for specialized positions at the secondary level is still undeveloped.

Teacher Organizations.—Chilean teacher organizations are of two types: union and professional. The first is represented by the *Federación de Educadores de Chile* (Federation of Chilean Teachers) formed in 1943. Within this federation are found the following:

Asociación de Educadores de la Enseñanza Industrial y Minera (Association of Industrial and Mining Teachers)

Sociedaa de Profesores de Enseñanza Comercial y Técnica Femeninas (Society of Women Commercial and Technical Teachers)

Sociedad de Profesores de Escuelas Normales (Normal School Teachers' Society)

Sociedad de Profesores de Instrucción Primaria (Society of Elementary Teachers)

Sociedad de Profesores Jubilados (Society of Retired Teachers)

Sociedad Nacional de Profesores (National Teachers Society)

Unión de Profesores de Chile (Federation of Chilean Teachers)

These organizations have been concerned primarily with the improvement of salaries and working conditions, but they have also played an active role in educational reform. One of the most influential of the groups combined in the Federation is the *Sociedad Nacional de Profesores*, which celebrated its fiftieth anniversary in 1959.[11] Its membership comes mainly from the ranks of secondary teachers, and its main objective is the improvement of the economic situation of teachers.

The professional type of organization is exemplified by the *Asociación Nacional de Profesores de Estado* (National Association of State Teachers) founded in 1956. Its membership is composed exclusively of secondary teachers with titles. Seeking to promote the dignity of the profession and the improvement (*perfeccionamiento*) of its members, it has strictly professional aims.

Other professional organizations called *centros* (centers) are based on subject matter interests. They include centers for teachers of biology and chemistry; civics, geography, and history; mathematics; music; Spanish; and other subjects.

[11] For a summary of the society's achievements over 50 years, see p. 1–16 of the 1959 May–August issue of *Revista de Educación* (Ministerio de Educación Pública).

Teachers in Private Schools.—The discussion on teachers thus far has focused mainly on public school teachers. Accurate, up-to-date data about teachers in private schools are difficult to obtain. Since there are no established regulations regarding teacher qualifications for private schools, a wide range of competency prevails among private school teachers. The percentage of these teachers who possess titles is smaller than the percentage of public school teachers. Moreover, compared with public schools, private schools pay less attention to qualifications in determining remuneration and other matters.[12] Salaries are on the whole inferior to those in public schools.

Problems of the Profession

Teachers in Chile are confronted by many grave problems. The present bulletin has already mentioned the poor condition of school buildings, the lack of instructional materials and laboratories, and the frequent absence of community interest in and support for the educational program. Additional problems are those concerning teachers—low salaries, frequent lack of qualifications, excessive working hours, inadequate supervision, and the need for revised promotion policies. Each of these requires further elaboration.

Low Salaries.—An official Government report points out the many unfortunate consequences of the low salaries paid to teachers. For one thing, youths have tended to bypass the teaching profession for the very reason that its monetary returns are so low. Consequently, teacher-preparing institutions could not be selective in admitting students. Secondary teachers, who are paid by the hour, have resisted going to the provinces to teach because of the difficulty in arranging a full-time teaching schedule. Teachers have engaged in various kinds of outside work to augment their teaching salaries, thereby reducing the amount of time and energy they could use for professional improvement. To achieve economic goals they also have devoted considerable time to politics and to union activities, including strikes. Some teachers have abandoned teaching for other professions, and some have emigrated to other countries.[13]

Lack of Qualifications.—Related to the economic situation is the lack of teachers with suitable preparation, particularly at the secondary level. This lack is most apparent in the provinces and in certain sub-

[12] Waldomar Cortes Carabantes. "El Professor Secundario en Chile."
[13] Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 51.

ject fields. A recent study showed that in the provinces 68 percent of the biology and chemistry teachers in the *liceos* did not have titles.[14] Elementary teachers who meet the minimum qualifications for titles have the equivalent of only a secondary education.

Working Hours.—The standard full-time schedule for secondary teachers is 36 hours. The following quotation typifies the criticisms of secondary teachers:

> The life of the secondary teacher consists no more and no less of teaching—if he wants to live on an average scale—the largest number of class hours; of correcting an infinity of tests and papers; of preparing for classes; and if time remains, reading some book of interest. In this regard, we remember the profound surprise manifested by a colleague from [another country] when, on a certain occasion, we informed him about the number of weekly class hours we were expected to teach in Chile. He only could ask: "But, when do you prepare for your classes?" [15]

Another critic comments in a similar vein, pointing out that 6 hours of classes daily, with as many as 50 to 60 pupils, preclude all possibility of efficient teaching and leave little time or energy for reflection or creative activities.[16]

It should be pointed out that a system of *cátedras* (teaching chairs) has recently been inaugurated providing for some reduction in teaching load so that the secondary teacher may have time for other educational responsibilities.[17] Thus far the plan has been applied only to teachers with titles.

Supervision.—With minimal preparation, with large classes, and with meager instructional resources, the teacher needs far more supervisory assistance than is normally available. An influential report of the Ministry of Education pointed up the deficiencies of the supervisory system when it stated that the province of Cautín, with 501 private elementary schools and 301 public elementary schools, had only 5 supervisors to control both systems.[18] The supervisory system for the secondary schools is equally inadequate. Professional magazines, from which teachers may glean useful ideas, generally are not available.

Promotion Policies.—The centralism of Chile's educational system with its many controls provokes numerous questions about its efficiency

[14] Irma Salas S. y Egidio Orellana B. *Correlación entre el Liceo y la Universidad.*
[15] Waldemar Cortes Carabantes op. cit., p. 17.
[16] Olga Poblete de Espinosa. "Reforma Educacional y Condiciones de Trabajo de la Enseñanza Secundaria." p. 36.
[17] Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 46.
[18] Ministerio de Educación Pública. *Bases Generales para el Planeamiento de la Educación Chilena.* p. 48.

in the selection and advancement of personnel. Teachers who advance to higher categories must submit to rigorous competitive examinations (*concursos*), and they must also have seniority. The heavy emphasis on the latter qualification raises the question of whether seniority or merit is of greater importance in advancing personnel to higher positions.

10. Other Related Educational Programs

NOT ALL EDUCATIONAL ACTIVITIES in Chile are under the Ministry of Education or the public and private universities. Numerous government, quasi-government, and private agencies sponsor educational and related services. Adult education and social welfare activities, adjuncts to the regular educational programs, are carried on by the Ministry of Education, other government agencies, the universities, and private institutions. The present chapter will not attempt to delineate all of these educational and social welfare enterprises, but will only briefly describe the major ones.

Programs of Government Agencies

The Ministry of National Defense maintains the following types of schools:

- Military, naval, and aviation schools for preparing officers of the armed forces.
- Schools for preparing technical and specialized personnel—such as the School for Lighthouse Keepers, School for Naval Artisans, School for Navy Hospital Attendants, School for Specialities of the Air, and School for Specialities of the Army.
- Schools for preparing enlisted men and noncommissioned officers.

The Ministry of the Interior maintains a School for State Police, a School for Postal and Telegraph Workers, and a Technical School of Investigations.

The National Health Service maintains courses for nurses aides and two university-level schools—one for dieticians and one for nursing.

Under the Ministry of Justice is found a School for Prison Workers, which prepares prison guards and officials.

The National Railways maintains a School for Apprentices and a Technical Railroad Institute.

The National Air Lines maintains a school called *Centro de Instrucción de las Lineas Aereas Nacionales* ["LAN"] (National Air Lines Instructional Center).

Municipalities maintain 14 elementary schools, which, however, are under technical control of the Ministry of Education.

The schools maintained for the military services offer specialized training programs on both the secondary and the higher education levels.

Escuela de Aviación (School of Aviation) trains pilots for the Chilean Air Force in a 3-year course leading to the rank of second lieutenant and the title of *piloto de guerra* (war pilot). Candidates must be 18 to 20 years of age and must be graduates of a secondary school. A lower-level school offers a 3-year program for Air Force mechanics leading to the rating of second-class corporal for candidates who have completed at least the first cycle of the secondary school.

Escuela Militar "Bernardo O'Higgins" (Bernardo O'Higgins Military School) trains army personnel. Candidates for the general course of 3 years must be between 14 and 17 years of age and must have completed the first cycle of the secondary school. After completing the general course, the candidate receives the *cadete bachiller en humanidades* (cadet bachelor in humanities). An additional year of training in either administration of field service entitles the cadet to a commission in the regular army or the reserve.

Escuela Naval "Arturo Prat" (Arturo Prat Naval School) trains personnel for the Chilean Navy. Applicants who are 16 and 17 years of age and who have completed the first cycle of the secondary school are admitted on the basis of competitive examinations. The following courses are offered: 5-year executive, a 2-year naval administration, and a 2-year merchant marine. Completion of the third year of the 5-year course is considered equivalent to graduation from the *liceo* and entitles the student to a secondary school naval certificate. Graduates of the executive and administration courses receive commissions and must take a 1-year tour of instruction on duty. Graduates of the merchant marine course receive the title of engineer or pilot and a commission in the Navy Reserve.

Adult Education: The Ministry of Education and the Universities

In a country with 20 percent illiteracy and with a large dropout rate in the primary grades, programs of adult education and literacy training assume a role of major importance. They are carried on by the universities, private agencies, and the directorates in the Ministry of Education.

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The Directorate of Elementary and Normal Education.—The Adult Education Section of this Directorate sponsors the most extensive programs of adult education. These programs are aimed at eradicating illiteracy, providing elementary education, developing vocational skills, disseminating culture, and promoting community rehabilitation through the following four types of institutions:

- ***Elementary Schools for Adults.*** (Function 10 hours weekly and may be evening or night schools. Their objective is to provide a basic education and an opportunity to complete elementary education.)
- ***Special Schools for Adults.*** (Operate 24 hours weekly and may provide basic education, popular culture, or art dissemination. Some operate in hospitals and prisons and offer a flexible curriculum in accordance with the varied needs of the people served.)
- ***Centers of Fundamental Education.*** (Centers of community development which focus on improving the health, the homes, the economy, the recreation, and the culture of the community. Agricultural and health agencies collaborate in the program, and the United Nations furnishes technical assistance. Three of these centers were operating in 1963.)[1]
- ***Civic Corps of Popular Literacy Training.*** (*Cuerpo Cívico de Alfabetización Popular.*) (Literacy training is provided in all of the programs named above, but the major responsibility for eradicating illiteracy is placed on the Civic Corps of Popular Literacy Training created in 1944 with the purpose of interesting the general public in adult education. Directed by a Central Board and by Department and Local Boards, the Corps is composed of volunteers who may be students, employees, professional people, members of police organizations, and other citizens with a public spirit.

  University students have been among the most active in the literacy campaign. Not only have they organized their own forces through the university student federations, but they have enlisted the support of university students from many other countries. In 1962, 345 schools for adults with an enrollment of 32,500 were functioning.[2] These schools along with the Civic Corps add an average of 20,000 adults annually to the ranks of literate citizens.)

The Directorate of Secondary Education.—Three public night schools in Santiago offer secondary [3] education to adults, using the programs followed in the day schools. In 1961 these schools had an enrollment of 1,097 adults of both sexes.[4] The majority of night secondary schools, however, were private, for which no enrollment data were given in the source material.[5]

[1] Ministerio de Educación Pública. *Informe de Chile.* p. C 4–1.
[2] Ibid., p. C 3–13.
[3] Ibid.
[4] Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 54.
[5] Ibid.

Directorate of Vocational Education.—Public vocational evening and night schools for adults in 1961 numbered 44, with 5,049 enrolled; and private 26, with 3,705 enrolled.[6]

University Extension Activities.—All the universities maintain extension programs comprising cultural activities, lectures, concerts, and specialized short courses. The University of Chile, Pontifical Catholic University of Chile, and Catholic University of Valparaíso all offer educational television. Since Chile has no commercial television, the country has been debating the question of whether television should remain an exclusive medium of educational and cultural dissemination managed by the universities or whether it should be commercialized.

Adult Education: Private Efforts

Two of the most important private agencies of adult education are the Institute of Rural Education and The Foundation of Popular Education.

The Institute of Rural Education.—Founded in 1955 as an independent, nonpolitical organization with a Christian orientation, the Institute of Rural Education was recognized officially in 1956 by the Ministry of Education as a "cooperator in the educational functions of the State." Its aim is to create better living conditions for the rural population through basic education, training of rural leaders, and delevopmental aid to rural community organizations.

The need for the Institute of Rural Education can be found in the conditions which attend rural education.[7] Of the approximately 5,000 rural schools, about 60 percent are public, and the rest private. The majority have only four grades with an added small amount of agricultural education. The majority of the school plants are deficient. Many lack textbooks, maps, electric lights, and even chairs and desks. Or they may lack farm implements, tools for manual work, and facilities for home economics.

The rural teacher often comes from an urban environment to which he plans to return after serving the required 3 years in the country. He often lacks a normal school education, and if he has that, his preparation in the area of agriculture is usually deficient. He teaches a curriculum primarily urban and academic.

[6] Ibid.

[7] These conditions are described in the 7-page, no-date leaflet "Surco y Semilla," put out by the Instituto de Educación Rural.

Because of these conditions in the rural schools, local families often send their children to school for the first 2 or 3 years only, and then withdraw them for farm labor, which they consider more important than formal education.

The Institute of Rural Education promotes rural development through the following activities:[8]

Basic Education. (Free and lasting 5 months, the courses are offered to youths between the ages of 16 and 25. Include (1) general complementary education covering subjects usually forgotten after primary school and (2) basic trades education, such as fruit raising and farm mechanics. Between 1955 and 1962 a total of 4,723 young men and women finished these courses.)

Technical Training. (A total of 20 weeks' training to prepare students to operate farm machinery and work at carpentry and other trades.)

Radio Education. (Through a radio program called *Surco y Semilla*—Furrow and Seed—Organized in 1958, the Institute offers to the rural schools a complementary program following the Ministry's prescribed curriculum. In 4 years the Radio School, with 40-some broadcasting stations cooperating, has produced more than 21,700 programs to 1,300 private and public rural schools.)

Rural Publications. (The Institute publishes and distributes 10,000 copies of a magazine called *Surco y Semilla* and containing practical articles for the rural reader; and also edits a variety of low-cost pamphlets.)

Cooperatives. (Established for consumers and producers, these cooperatives have a membership composed largely of *inquilinos*—workers on large land holdings—and small property owners.)

Rural Leadership Training. (Carried on in two schools, whose students are selected from the most capable who have been enrolled in other schools. After completing their training, these students become promoters of community development.)

Aid to Rural Organizations. (The Institute organizes *Centros Campesinos* (Rural Centers) in small communities to serve as a base for community action. A total of 402 such centers had been organized by 1962. The Institute also stimulates the growth of other organizations, which are nonpolitical and which work for rural betterment.)

The Institute of Rural Education receives support from the Government through the Ministries of Agriculture, Education, and Interior. Many other organizations cooperate in financing the Institute and its operations.

The Institute of Rural Education has grown rapidly and has been widely endorsed for its contributions in serving the needs of rural education. For the future, it plans to expand all its activities and

[8] Instituto de Educación Rural. *Information Concerning the Institute of Rural Education.*

establish training centers for the *colonos* (new land owners), which are considered indispensable to the success of a land-reform program.

The Foundation of Popular Education.—Throughout the country this foundation maintains *Institutos de Educación Popular Regionales* (Regional Institutes of Popular Education) in which adults of both sexes are given the rudiments of a trade as well as a basic education. In 1961 the foundation had 120 courses in operation with 3,082 enrolled.[9] A rapidly growing, nonpolitical organization supported by private sources and government subsidies, it offers a type of education in great demand by the working classes.

Social and Economic Assistance to Pupils

To help assure compliance with compusory attendance laws and greater equality of educational opportunity, an extensive program of social assistance for pupils at each educational level is provided by both Government and private agencies. The combined efforts of both fall short of meeting Chile's minimum needs in social assistance for pupils, but they do indicate a recognition of how important social welfare is to the success of the educational program.

Social Assistance at the Elementary Level.—The Ministry of Education maintains schools giving attention to pupils with physical, social, and mental irregularities. In 1962 there were 22 of these schools with 4,905 pupils.[10] The Ministry also provides *escuelas hogares* (home schools), offering free education, board and room, and other necessities to orphans, abandoned children, and children with home irregularities. In 1962 there were 46 of these schools with an enrollment of 6,872.[11]

The National Committee of Pupil Assistance (*Junta Nacional de Auxilio Escolar*) is an autonomous body created by law in 1953 principally to centralize and coordinate the administration of pupil assistance throughout the country. It functions through provincial and local committees composed of representatives of the Government, education, health, State police, municipalities, parent associations, and business enterprises. These committees seek to provide for needy pupils in both public and private schools breakfasts, lunches, clothing, and medical and dental attention. Through cooperation with CARE,

[9] Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* p. 56.
[10] Ministerio de Educación Pública. *Informe de Chile.* p. C 12–1.
[11] Ibid.

they have provided breakfasts to 50 percent of the elementary pupils and lunches to 30 percent.[12] UNICEF and the Committee on Technical Assistance of the United Nations have also made contributions toward better nutrition.

The National Mixed Commission of Health and Education created in 1956 exercises its functions of protecting and promoting the health of pupils through local mixed commissions made up of representatives of health and education. It also publishes and distributes free to pupils a magazine called *Por el Camino de la Salud* (On the Road to Health).

An Inter-Ministerial Commission, created in 1960 and composed of representatives of the Ministries of Interior, Education, Justice, National Defense, Labor, and Public Health, is assigned the responsibility of coordinating Government and private-agency social assistance to minors in irregular home situations.

Social Assistance at the Secondary Level.—The Ministry of Education provides a limited number of scholarships for secondary pupils. The Directorates of Secondary and Vocational Education, like the Directorate of Elementary Education, maintain programs of social welfare and dental assistance. In 1963 the social welfare workers employed by the various directorates totaled 36.[13]

Health services are provided through the hospitals and health centers of the National Health Service.[14] Many secondary schools have committees of welfare and health, composed of teachers and social welfare workers who help resolve economic, health, and nutritional problems of the pupils. In this effort they generally cooperate with the Parent Associations (*Centros de Padres*).

Numerous private institutions, such as the Lions Clubs, Rotary Clubs, and the Red Cross, provide economic aid, medical attention, summer camps and other services to both elementary and secondary pupils.

In addition, religious and private institutions maintain schools providing free education and maintenance to pupils of limited resources.

Social Assistance at the University Level.—Each of the universities maintains a *Departmento de Bienestar* (Welfare Department) with its own teams of welfare workers, physicians, and dentists. Such a department offers the following aids:

[12] Ibid., p. C 12–2.
[13] Ibid., p. C 12–5.
[14] For a summary of the Service's numerous activities, see. *10 Años de Labor 1952–1962.* (Servicio Nacional de Salud).

- Exemption from tuition and other fees
- Homes and boarding facilities for youths from outside the locality
- Individual social assistance
- Medical and dental services
- Scholarships and subsidies for lodging, books, and other needs.

Social welfare programs may be financed by funds from the university budget, contributions of students in favorable financial situations, and various other public and private sources.

11. Educational Aid From Outside the Country

In recent years, particularly since the 1960 earthquakes, Chile has been the recipient of substantial financial and technical assistance for education from the U.S. Government, various specialized agencies of the United Nations, various inter-American organizations, other governments, specified and private sources.

United States Government Aid

The U.S. Government, through the Agency for International Development (A.I.D.)—formerly the International Cooperation Administration (I.C.A.)—has made grants for several educational projects, including those for scientific facilities in the seven Chilean universities, school building construction, rural education, and binational centers.

Scientific Facilities.—By means of a contract between the National Academy of Sciences and I.C.A., the project sought to improve or establish university science teaching and research facilities, develop a cadre of trained scientists and engineers, and establish special research institutes to promote the development of national resources.[1]

School Building Construction.—Aid for school building construction was extensive following the 1960 earthquakes. On June 22, 1963, at the dedication of the first school financed entirely by Alliance for Progress funds, the Director of the Society for the Construction of Educational Establishments paid a tribute to the help of the United States when he stated that, with assistance from the United States, 106 buildings had been completed or were under construction with a capacity of 37,125 pupils.[2]

Aid to Rural Education.—The Agency for International Development has furnished funds and technical assistance to the Institute of Rural Education, whose activities were described in chapter 10. A contingent of the Peace Corps has also cooperated in the Institute's work.

[1] National Academy of Sciences—National Research Council. *Report of the Mission to the Seven Universities of Chile.*

[2] *El Mercurio.* Santiago, June 23, 1963, p. 35.

Binational Centers.—The U.S. Government also contributes to operation of binational centers (*Institutos Chileno-Norteamericanos de Cultura*). These are autonomous cultural organizations governed by a binational board of directors responsible to the Chilean Commission of Intellectual Cooperation. Although these centers are most widely known for their teaching of English, they are in fact cultural centers since they sponsor lectures, exhibits, musical and artistic events, and many other activities. They also maintain extensive libraries with about two-thirds of the volumes in English.

In July 1933, 15 binational centers were operating throughout the country with 4,600 students enrolled in the English classes at the Santiago center alone. The United States Government aids by providing American administrative directors for five of the centers, English-language books and magazines, some furniture, and a small allowance for a few of the centers.

United Nations Aid

UNESCO.—From UNESCO, Chile has received extensive educational aid in the form of projects, technical experts, equipment, and scholarships for study abroad.

In 1956, at New Delhi, the General Conference of UNESCO adopted as its principal project one to extend and improve elementary education in Latin America with the objective of eliminating illiteracy throughout the area. From this project Chile has derived many direct and indirect benefits, including technical assistance, scholarships, and publications.

In 1958, through a contract between UNESCO and the University of Chile, a *Centro Latinoamericano de Formación de Especialistas en Educación* (Latin American Center for the Training of Educational Specialists) was established at Santiago. The purpose of this center is to train, at the university level, educational personnel from Latin American countries who have directive functions. The center has offered courses each year, and, on the average, 10 such Chilean educators and 20 from other Latin American countries have attended them.[3] In addition to his regular courses, each participant has a research project of his choice related to the needs of his own country.

Another outgrowth of the New Delhi conference was a regional project established in Chile and known as the *Facultad Latinoamericana de Ciencias Sociales* (FLASCO) (Latin American School of So-

[3] Ministerio de Educación Pública. *Informe de Chile.* p. C 9–2.

cial Sciences). Created by the Latin American Governments in collaboration with UNESCO, FLASCO trains specialists in the social sciences at the postgraduate level for the universities of the region. Owing to technical and financial reasons, instruction at FLASCO has been limited to a 2-year sociology course.

Besides these two regional institutions, UNESCO has given assistance to community development, the Ministry of Education, universities, and private institutions.

As mentioned in chapter 8, UNESCO has aided the University of Concepción to establish four basic institutes (one each for biology, chemistry, mathematics, and physics). The Special Fund of the United Nations later awarded this university a grant to improve instruction in engineering and in the courses of the polytechnical school.

UNESCO has provided technical assistance to all Chilean universities through importing foreign experts and supplying laboratory equipment, audiovisual materials, books, and publications.

UNESCO has also aided the Ministry of Education by furnishing experts in educational and vocational guidance and science teaching and by sending equipment to secondary and normal schools in the earthquake zone.

Through a program of scholarships sponsored by UNESCO, educators and researchers have been sent abroad to improve themselves in a wide range of specializations including chemistry, educational statistics, marine biology, nuclear physics, and oceanography.

Centro de Enseñanza e Investigaciones Demográficas (Center of Demographic Instruction and Research).—Established at Santiago in 1957 by agreement between the United Nations and the Government of Chile, this center's principal objectives are to (1) organize courses on demographic techniques and analyses to train Latin American students to establish similar courses in their own countries; (2) initiate studies on population problems; and (3) provide consultant services on population problems to Latin American governments. Scholarship holders from Chile and other Latin American countries have attended the center's courses over the last 4 years.

Sección de Planeamiento Educativo (Section of Educational Planning).—This organization was established in Santiago as a result of an agreement between UNESCO and the *Instituto Latinoamericano de Planificación Económica y Social* (Latin American Institute of Economic and Social Planning). Grantees come from Latin American countries including Chile.

UNICEF.—The United Nations Children's Fund has contributed economic aid for educational programs in nutrition and sanitation.

In 1958 it granted $97,300 (U.S.) for a 3-year program to train 600 nurses aides for *Centros Sanitarios Rurales* (Rural Sanitation Centers).[4] In the same year UNICEF made a grant of $126,800 to improve nutrition in selected rural areas.[5] Under the program, milk was distributed, school gardens were organized, and nutrition courses were given to 240 rural school teachers.

In 1961 UNICEF granted $90,000 to develop a study course in public health and health education and to train normal school students so that henceforth the course content would be taught to all elementary pupils. Specifically, UNICEF contributed equipment, teaching materials, implements and utensils for the normal schools; vehicles for supervisors; and scholarships for the training of selected personnel. The overall project, jointly sponsored by the Ministry of Public Health and the Ministry of Education, shows the country's earnest concern about health, which is described in an official report as the "first specific objective of Chilean primary education."[6]

Private Foundation Aid

Numerous North American foundations have contributed educational aid to Chile, mostly in the form of scholarships. Two of these have participated extensively in developmental programs within the country. One is the Rockefeller Foundation, whose activities in rural school construction and technical development of rural education were described in chapter 9. The other is the Ford Foundation, whose grants are the most extensive.

Projects Aided by the Ford Foundation.—Since 1960 the Ford Foundation has granted several million dollars to various educational projects in Chile, most of them at the university level. The University of Chile has been the chief beneficiary. It has received grants for the university regional colleges, the graduate program in economics, the research program of the Institute of Education, a new graduate program in business and public administration, and a workshop on educational test construction.

The University of Concepción has received a substantial grant to reorganize its science and mathematics programs. Pontifical Catholic University of Chile has a similar grant for its program of physical and mathematical sciences. The State Technical University has re-

[4] Ministerio de Educación Pública. *Aspectos de la Situación Social y Económica Que Afecta a la Educación.* P. 80.
[5] Ibid.
[6] Ministry of Public Health and Ministry of Education. *Integration of Public Health and Health Education in Plans and Curriculum of Normal Schools.* Santiago, 1961. P. 1.

ceived help on overall university development planning, and the National Commission on Educational Planning was awarded a large grant in May 1963.

In selecting recipients for grants at the university level the Ford Foundation has endeavored to support programs which will (1) have been an impact on higher education in general, (2) help universities respond better than previously to the country's social and economic needs, and (3) solidify desirable trends and reforms.[7]

Scholarships

In proportion to its population Chile has received the largest number of scholarships for study abroad of all Latin American countries. Reports for 1962 stated that the number of such scholarships had exceeded 450,[8] most of them for postgraduate study. More than 200 of the 450 grantees were in the United States, holding scholarships granted by the U.S. Government, various foundations, and numerous universities.[9]

European nations also contribute scholarships in the following numbers: France, about 40; Germany, about 40; Italy, 20 to 25; Great Britain, about 25.[10] Other sources of scholarships are Brazil, Canada, Czechoslovakia, the Soviet Union, and Yugoslavia. The Chilean Commission of Intellectual Cooperation aids in the selection of most grantees.

Scholarships are also received from the United Nations and the Specialized Agencies, such as UNESCO; and from the Organization of American States.

Scholarships from all these sources have been a form of aid—economically, culturally, and educationally. If one considers the cost of each of the 450 annual scholarships at $2,000, then Chile receives $900,000 aid from foreign sources in the form of scholarships. It would be difficult to measure the value of the scholarship to each recipient or to estimate his contribution as the result of the experience. These are intangibles on which no accurate monetary value can be placed. Nor is it necessary to do so. The extent of Chilean participation in scholarship programs is evidence enough of the value which Chile places upon them.

[7] The Ford Foundation. November 8, 1963. (Letter to author.)
[8] *Aspectos de la Situación Social y Económica Que Afecta a la Educación. op.cit.*, p. 82.
[9] Ibid.
[10] Ibid.

12. Progress, Problems, and Prospects

AFTER A CENTURY AND A HALF of independence, what have been Chile's solid achievements in education? What problems remain unresolved? What are the prospects for the future? These questions are the concern of this final chapter, which seeks to synthesize and summarize some of the observations of preceding chapters.

Progress

To judge educational progress in Chile one must use a standard of some kind. One may use the past as a basis of comparison. He may use other countries in similar situations. Or he may use national needs and goals as articulated by responsible leaders. If a Chilean uses only the first two standards, the result may be self-satisfaction about the great strides already made. When he uses the third standard, he becomes less complacent about past achievements and becomes more concerned with current realities because he recognizes that educational progress to date represents hardly more than a step in the direction of long-range objectives.

Chile has a record of educational achievement of which it can be justly proud. Its educational system ranks among the best in Latin America. Its illiteracy rate of about 20 percent is among the lowest. The average number of school years completed is 4.4, one of the highest averages of Latin America. Its universities hold high rank in Latin America and some of their departments compare favorably with those of universities anywhere. The growth of university and secondary enrollment, academic and vocational, since World War II reflects the trends toward increasing democratization, industrialization, and urbanization in Chilean society.

Among outstanding educational leaders in Latin America Chile has had the following: Manuel de Salas, founder of the *Academia de San Luis;* Andrés Bello, humanist and first rector of the University of Chile; Domingo Faustino Sarmiento, Argentine-born educator who became director of Chile's and Latin America's first normal school;

Dario Salas, the principal moving force behind the 1920 approval of the compulsory elementary education law. To bring this incomplete list up to date, one should include the name of Irma Salas, an outstanding current leader in secondary education, educational research, and development of the university regional colleges.

Chile has pioneered in new ideas. Since World War II the secondary schools have gradually incorporated innovations, including guidance services and a more flexible curriculum. A 10-year experimental project begun in 1961, the *Plan de Arica*, seeks a better coordination between levels and types of schools and thereby attempts to correct a deficiency in the present structure. Regional university colleges, the beginnings of graduate work in many fields, and basic institutes to serve the professional schools are among the innovations which are changing the traditional concept of higher education in Chile.

Certainly part of the credit for the positive developments in Chilean society can be attributed to the schools. Foremost among these developments are political stability; the maturity of institutions; the increasing strength of a growing middle class; the vigorous activities of political, economic, and social groups; and commitment to the democratic processes. These are no mean achievements in a country faced with so many unresolved economic and social problems.

Problems

Chile is not satisfied with its achievements. It is more preoccupied with such problems as an illiteracy rate of 20 percent; a dropout rate of over 70 percent before the end of grade 6 and of over 97 percent before the end of secondary school; and a failure rate of about 50 percent on the *bachillerato* examination, the principal hurdle for university admission.

Administratively, the school system is marked by a high degree of centralism, a lack of coordination among the various directorates of the Ministry, a lack of articulation among different levels and types of schools, inadequate supervision, and minimal coordination between the public and private schools, which operate as dual systems.

Add the deficiency of school plants and equipment, a rigid curriculum, inferior teaching methods and materials, lack of qualified teachers, the unfortunate conditions surrounding rural education, and the general low level of school support and one gets an impression of qualitative as well as quantitative deficits in the educational system.

Possibly Chile's overriding educational problem is that of attuning its educational system to the needs of an economically developing society.

Prospects

Chilean leaders are aware of their educational needs. A commission was appointed in 1961 to make a preliminary study and to propose the general bases for planning Chilean education in all its aspects. The commission's report [1] received wide acclaim throughout the country and served as the prelude to a Government-decreed *Comisión de Planeamiento Integral de la Educación Chilena* (Commission for the Integral Planning of Chilean Education).[2]

The Commission is composed of high-ranking educational and Government leaders, including some members of the Congress. Its Executive Secretary is Oscar Vera, Chief of the Division for Latin America of the Department of Education of UNESCO, on loan to the Commission.

The Commission was assigned the task of studying the demographic, economic, educational, and social factors relevant to the task of integral educational planning and of proposing solutions to problems.

In 1963 the Commission undertook research studies on the following topics:

- The attitudes of various social groups toward education and the values they attach to it.
- Educational personnel—numbers, qualifications, years of service, job description, etc.
- Human resources—labor force distribution and type and levels of education required in various occupations; the need for specialized personnel in social and economic developmental plans.
- Pupil distribution by grade and age throughout all private and public education (including adult education) from the kindergarten to the university.
- School maps of all communities in the country as a basis for organizing and distributing various kinds of educational service.

The Commission has also organized task forces of specialists from the various levels of education to study problems and make proposals for solving them. One proposal was for a new educational structure. The new structure aims to correct many of the deficiencies of the pres-

[1] Ministerio de Educación Pública. *Bases Generales para el Planeamiento de la Educación Chilena.*

[2] Decree of December 28, 1962. See *Informe de Chile*, p. 1–12, for a description of the Commission and its activities (Ministerio de Educación Pública).

ent system. Some of the new structure's main features are the following:

Preschool Education. (An expansion of free kindergarten education is recommended, along with medical and social services, for children of disadvantaged families.)

Cycle of General Education. (A 9-year cycle of general education, embracing the present 6 years of elementary and first 3 years of secondary education, is recommended for all pupils between the ages of 6 and 7 and 14 and 15. In the last 2 years of the cycle the pupil would receive vocational orientation, and when he graduated, a certificate of general education showing not only his achievement but also his special aptitudes for various kinds of work.)

The Secondary Cycle. (Pupils would follow one of two directions: a 1-, 2-, or 3-year technical vocational course or a 3-year scientific-humanistic, university-preparatory course.)

One of the present system's chief defects that the new structure proposes to correct is the large number of years devoted to vocational studies. The new program would be flexible and would be planned on the basis of careful study of the quantitative and qualitative needs of workers in various occupational fields. Moreover, it would rest on a solid base of general education given in the 9-year cycle.

Another deficiency of the present system is the fact that teachers are not truly professionalized. To provide the kind of leadership that a modern educational system demands the new structure proposes high levels of specialization in such fields as administration, curriculum, evaluation, finance, guidance, planning, research, school construction, and supervision.

Adult education would include both general education and vocational training. Literacy training would not be pursued as an end in itself, but as an integral part of community development programs and vocational training.

The proposed plan has several advantages over the present one. It avoids the duplication of the last years of the elementary school and the first cycle of the secondary. It permits the development of adequate educational and vocational guidance services. It postpones the decision about vocational choice, which is made at the end of the elementary school under the present system, to a later time when the pupil is more mature, and permits a reduction in the number of years of vocational training. It facilitates a close correlation of vocational training with the needs of economic development. It seeks to facilitate compulsory school attendance by providing a broader base of welfare services.

The Commission also seeks to address itself to the thorny problems of dropouts, the wide range of ages within each grade (at present it is 5 to 16 in the first grade), and widespread non-attendance.

The proposals of the Commission are far-reaching and will be profoundly disturbing to the defenders of the status quo. To what extent its proposals will be accepted and implemented cannot be predicted. Chile has already formulated detailed, long-range plans for social and economic development. The persistent challenge to educational planners is to adapt the educational system to these goals. A strong, viable economy must be undergirded by a sound educational system and vice versa. In Chile both are underdeveloped; they must grow up together, each lending its strength to the other.

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