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CHAPTER VII

Educational Progress in the Argentine  
Republic and Chile

*Leo Stanton Rose.*

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## CHAPTER VII.

### EDUCATIONAL PROGRESS IN THE ARGENTINE REPUBLIC AND CHILE.

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The great work of educational regeneration undertaken by the United States Government in Cuba, Porto Rico, and the Philippine Islands has aroused widespread interest in all matters relating to the countries of Spanish civilization. This newly awakened interest comes at a most propitious time, for it is coincident with a clearly defined movement throughout South America to profit by the experience of the United States in educational matters.

Heretofore the South American countries have accepted European educational methods without question. In fact their intellectual stimulus has proceeded almost exclusively from European sources. In Brazil, in the Argentine Republic, and in Peru, French influence has been dominant; in Chile, German methods have been followed, especially in the organization of secondary education.

Acquaintance with educational aspirations and educational progress in South America is a matter of far more than passing interest to teachers in the United States. In the course of two prolonged tours through South America during the past three years not only were innumerable requests for material and data relating to American educational methods received, but also constant inquiries for competent men and women to take charge of educational institutions.

Although it was comparatively easy to furnish all the data requested, the problem of supplying candidates for the available positions has presented great difficulties. These difficulties have been due in part to the uncertainty of tenure in some of the countries, and in others to the lack of preparation of American teachers for the posts in question. Fortunately the uncertainty of tenure is rapidly disappearing, for most contracts now read for a minimum period of five years, and what is more important, their provisions are carefully observed.

The inadequate preparation of American teachers for service in Latin-American countries and their lack of adaptability constitute



the most serious obstacles to the efficient performance of a service which practically all these countries are now asking of us.

Owing to their greater adaptability the Germans have been able to supply competent teachers wherever and whenever the opportunity has presented itself. The ease with which they acquire foreign languages, together with their quick appreciation of the point of view of the country in which they settle, gives to the Germans a position of marked influence in educational affairs. Thus in Chile, German ideas have dominated the system of secondary education. The faculty of the pedagogical institute, from which all high-school teachers are graduated, is composed almost exclusively of Germans.

It is likely that the teachers returning from the Philippine Islands and Porto Rico will furnish a considerable contingent of available candidates for positions in Latin America, but there still remains the serious defect of the lack of adaptability of the average American. At bottom, this lack of adaptability is due to a certain provincialism of the American mind. Much of this can be remedied by giving to the study of Spanish and Spanish-American history and institutions a more important place in our normal schools; at least making these studies elective for those who may be looking forward to foreign service.

The small group of American normal-school teachers brought by President Sarmiento to the Argentine Republic furnishes a most striking instance of the possible influence of a corps of carefully selected teachers. Although the immediate activities of these teachers were confined to the city of Parana, their influence has extended throughout the Republic. At the Parana Normal School were trained the educators who have reorganized educational methods in the Argentine Republic, introducing modern pedagogical standards. To-day the names of this small group of American teachers are revered throughout the country.

Fortunately, the desire of the people of South America to profit by the experience of the United States comes at a time of awakened and increasing interest in Latin-American affairs in the United States. Independent of the possibility of sending American teachers to assume charge of South American institutions, our educational experience can not help but be of great value to our neighbors. This service consists not so much in a bodily transplanting of the American educational system as in impressing upon educators throughout Latin America the necessity of greater elasticity of curricula and of closer adaptation of educational methods to local needs and local conditions. The increasing complexity of our primary and secondary curricula, together with the tendency to introduce with each year new subjects of instruction, has resulted in many cases in an overloading of the course of study. In spite of the danger, however, our system

has maintained an elasticity of form and an adaptability in application to local needs quite unknown to most of the South American countries.

The most serious defect of educational organization in the Argentine Republic, Brazil, Chile, and Peru is this tendency to impose the same course of study on every boy and girl, quite irrespective of their tastes or subsequent vocation. From the primary school to the close of the high-school course not the slightest freedom of choice is permitted. It is true that in all of these countries there exist industrial and commercial schools, but up to the present time these schools have occupied a subordinate and inferior position, the sons of the wealthier families avoiding them because of a well-defined social prejudice against this type of education.

The result is that in Brazil, the Argentine Republic, and Peru, and to a certain extent in Chile,<sup>a</sup> the great mass of boys and girls who advance beyond the primary grades are required to follow a course of study patterned in large measure after French models and intended to prepare for the liberal professions, especially law and medicine. Even from this point of view the course of study is open to much criticism, largely because of its rigidity and complexity, but its most serious defect is that it encourages a great number of young men, best fitted for commercial or industrial life, to enter callings for which they have no real capacity. It is true that this tendency is traceable to an inherited Spanish prejudice against trade, but this is all the more reason why the educational system should be so adjusted as to overcome, or at least counteract, such prejudices. The ambition of almost every family in these countries is to have their sons enter the legal or the medical profession, which has resulted in a degree of overcrowding unknown in any other portion of the civilized world.

This is, however, by no means the most serious consequence. The manifest tendency of so large a proportion of the intelligent young men to enter the legal and medical professions, together with the existing social prejudice against trade, has robbed these countries of their best talent in those fields in which they stand in greatest need of carefully trained men and women. It is largely due to this fact that important native business houses are the exception rather than the rule. The large fortunes of native-born Argentinians, for instance, have been built up on the increasing value of real estate, due to the natural growth of the country rather than to commercial or industrial initiative or enterprise. Industrial enterprises requiring constant application and assiduous attention are in the hands of foreigners.

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<sup>a</sup> Owing to the marked German educational influence, Chile has escaped some of the worst consequences of this system.



It is here that the Latin-American countries can secure their most valuable lesson from the experience of the United States. The remarkable development of our industrial and commercial schools represents the most conspicuous educational contribution of the United States. The freedom of choice by which a student upon entering the high school may, without the slightest loss of standing, elect any one of three or four possible courses has been of incalculable service to the country. It has given to trade and industry some of the best talent and capacity instead of making these callings the residual claimants for those who for one reason or another may be unfitted to follow the so-called "liberal professions." All the Latin-American countries require a change of attitude toward commerce and industry as compared with law and medicine. The system of secondary instruction can be so adjusted as to contribute toward this end.

Another lesson of American experience of much importance to the Latin-American countries is the necessity of training a corps of professional teachers for the "liceos," or high schools. Chile is the only country that has made an important move in this direction. In the Argentine Republic the teaching corps of the high schools, or "colegios," as they are called, is made up of practicing lawyers and physicians. The result is that there is an almost total absence of that personal contact between pupil and teacher which is the distinguishing characteristic of our educational system. A move in the right direction has been made in the high school attached to the national university of La Plata. In fact, under the direction of the president and vice-president of this institution, Doctor Joaquin Gonzalez and Doctor Agustin Alvarez, a new spirit is gradually being introduced into the Argentine educational system. In order to make the high schools fulfill their real purpose it will be necessary first to raise salaries to a level which will attract competent men, who will make a career of these positions rather than, as at present, a mere incident to other callings.

A third lesson of American experience of incalculable value to the Latin-American Republics is the necessity of giving greater attention to the education of women. In spite of superficial indications to the contrary, there is no other portion of the world where the influence of women is as far-reaching. In many respects it is greater than in the United States, owing to the fact that in the Latin-American countries the training of children is left almost exclusively to the mother. That fellowship and companionship between father and sons so characteristic of family life in the United States is almost totally lacking. The mother's directing influence is almost if not quite exclusive. It is only when the sons have reached an age at which it becomes neces-



sary to choose a profession or calling that the father's authority becomes prominent.

The surface appearances of Latin-American society are most misleading in this respect. As soon as one becomes acquainted with family organization and customs, the tremendous influence of the wife and mother immediately becomes apparent. The tendency to keep the young woman as far removed as possible from contact with real life, the atmosphere of artificiality with which she is surrounded, together with the inadequate and in many respects superficial education which she receives, react unfavorably on the character and stability of Latin-American society. The young woman enters upon the duties of wifeness and motherhood with either a false or totally inadequate idea of social and economic conditions. An exaggerated spirit of indulgence toward children, an acceptance almost without question of the idea that the sons must sow their wild oats, and the consequent lack of discipline which this involves, tend to develop a generation but poorly equipped with the qualities of self-control, determination, and continuous application so necessary to the development of a vigorous race.

Furthermore, the idea of preparing young women of the middle class to earn their livelihood is but beginning to find acceptance in the countries of Latin-America. A start in this direction has been made in several countries, but even where, as in the Argentine Republic, a special commercial school has been opened for women, both the course of study and the type of training are distinctly inferior to those given in schools for male pupils.

It is true that there still exists throughout Latin-America a strong social prejudice against the entry of young women into commercial and industrial pursuits. This fact makes it all the more important that the best facilities be offered to the comparatively small group prepared to weather this social tradition. No more important influence can be set at work to overcome a prejudice which is a real obstacle to national progress.

It is not possible, within the limits of this report, to present a detailed account of the educational systems of the Latin-American Republics. We must, therefore, content ourselves with a brief description of the leading traits of those countries which we have had the opportunity to study with some detail—viz, the Argentine Republic and Chile.

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#### THE ARGENTINE REPUBLIC.

The impulse given to public education under the presidency of Sarmiento assured the Argentine Republic a position of leadership in educational matters among the South American Republics. Although much has been accomplished since that time, both in the

extension of the system and in the improvement of methods, it can not be said that the Argentine Republic has maintained that position of undisputed leadership in South American educational matters which it once occupied. The most serious obstacles to progress have been:

First. The poverty of the Provinces, upon which the responsibility for primary education was placed under the constitution of 1853, and—

Second. The lack of stability in the educational policy of the Federal Government in the development of the system of secondary instruction. The technical direction of this branch of the educational system has suffered severely from the uncertainties of political changes. Continuity of policy has been quite impossible. Each incoming minister of public instruction has attempted to leave his impress upon the system of secondary instruction by incorporating his personal views into the curriculum. Both the method and the content of instruction have suffered from this lack of stability and expert direction. It is only within the past two years that the necessity of divorcing the technical direction of the system from the conflicts of party politics has become apparent. The present minister of public instruction has recognized the importance of such stability by giving wider powers to the inspector of secondary instruction, who should be made in fact as well as in law the technical head of the system.

The Argentine educational system is divided into four distinct parts:

First. The elementary schools, for which the provincial governments are primarily responsible, but for the maintenance of which the Federal Government has been compelled to make large expenditures.

Second. The secondary schools, known as "liceos" and "colegios," and in which should also be included the normal schools, which are established, maintained, and controlled by the federal authorities, although the provincial governments may and in some cases have established institutions of the same grade.

Third. Commercial, industrial, and other special schools, which are, as a rule, established and supported by the National Government, but which may also be established by the provincial authorities.

Fourth. The three national universities, Cordoba, Buenos Aires, and La Plata, established and supported by the National Government.

#### PRIMARY INSTRUCTION.

The Argentine Constitution places upon the Provinces the obligation of maintaining a system of primary instruction. This obligation has been but partially fulfilled, owing in part to the lack of resources of the Provinces and in part to the absence of an organized public



opinion demanding the expenditure of a certain minimum of the public revenues on education. The failure of the Provinces to meet their obligations has made it necessary for the Federal Government to give the broadest possible interpretation to its constitutional powers; otherwise a large percentage of the people of the country would be deprived of all educational facilities.

In cooperating with the Provinces for the development of the primary-school system the Federal Government has acquired considerable control over this branch of the educational system. Wherever such schools are maintained by national funds, the federal authorities reserve control both over the curriculum and the personnel.<sup>a</sup>

The Central Government, furthermore, maintains complete control over primary education in the federal capital, Buenos Aires, and in the national Territories. This control is exercised by a salaried national council of education (Consejo Nacional de Educación) appointed by the President of the Republic. During the fiscal year 1907 this council expended \$4,212,419 for the establishment and maintenance of primary schools in the federal capital, in the national Territories, and for the primary schools in the Provinces supported by federal funds.<sup>b</sup>

With the gradual awakening of national opinion to the dangers incident to an inadequate system of primary instruction there is evident an increasing tendency to look to the Federal Government for the solution of this problem. The startling figures published by the superior council of education have given great impetus to the movement to nationalize the system of primary instruction. The present minister of public instruction has made this an integral part of his reform platform, and is convinced that there are no constitutional obstacles to the enforcement of the plan. His position has been greatly strengthened by the recent publication of data which give a graphic picture of the backward condition of primary education in the Argentine Republic. These figures, which are submitted in an accompanying table, will be supplemented by a school census now in progress, the detailed results of which will probably be available toward the close of this year or early in 1910.

<sup>a</sup> During the first nine months of 1908 the federal subsidies for primary instruction in the Provinces amounted to \$548,359.57. The total for the year will amount to over \$1,000,000.

<sup>b</sup> The number of primary schools in the Provinces maintained by the Federal Government is as follows (1907) :

Province.	Schools.	Province.	Schools.	Province.	Schools.
Santa Fe.....	28	La Rioja.....	32	Catamarca.....	38
Corrientes.....	34	Entre Rios.....	35	Salta.....	40
San Luis.....	43	Cordoba.....	34	Jujuy.....	27
San Juan.....	39	Mendoza.....	30		
Santiago del Estero...	39	Tucuman.....	38	Total.....	457



TABLE I.—Primary school statistics of the Argentine Republic.

Where situated.	Population Dec. 31, 1905.	School age as fixed by law.	School census.		School attendance.				Children of school age not attending school.			Percentage of children of school age not attending school.		
			Calculated on basis of school age determined by national law, 6-14 years.	Calculated on basis of school population as determined by local law.	In schools supported by Federal Government.	In schools supported by Provinces.	Private schools.	Total.	On basis of standard set by national law, 6-14 years.	On basis of standard set by law of the Provinces.	On basis of standard set by law of the Provinces.	On basis of standard set by law of the Provinces.		
	1	2	3	4	5	6	7	8	9	10	11	12		
<b>PROVINCES.</b>														
Buenos Aires.....	1,500,071	8-12	300,014	166,507	2,328	105,755	23,695	131,778	168,236	34,729	56.07	20.85		
Santa Fe.....	744,422	a 6-12 b 6-14	148,884	132,283	3,863	38,363	16,138	58,364	90,520	73,919	60.79	55.87		
Entre Rios.....	386,369	6-14	77,273	77,273	4,246	26,905	12,699	43,850	33,423	33,423	43.25	43.25		
Corrientes.....	309,253	a 6-12 b 6-14	61,850	54,953	5,042	24,504	2,624	32,170	29,680	22,783	47.98	41.45		
Cordoba.....	507,639	7-14	101,527	90,156	4,130	27,150	14,145	45,425	56,102	44,731	55.25	49.61		
Tucuman.....	276,856	6-14	55,371	55,371	3,463	27,203	2,881	33,547	21,824	21,824	39.41	39.41		
Mendoza.....	177,785	a 6-12 b 7-15	35,557	31,591	3,095	14,828	1,610	19,533	16,024	12,058	45.06	38.16		
San Juan.....	106,011	6-14	21,202	21,202	4,110	10,127	757	14,994	6,208	6,208	29.28	29.28		
La Rioja.....	84,536	6-14	16,907	16,907	4,697	5,225	137	10,039	6,848	6,848	40.50	40.50		
San Luis.....	102,226	6-14	20,445	20,445	3,999	8,812	355	13,166	7,279	7,279	35.60	35.60		
Catamarca.....	105,156	a 7-12 b 7-14	21,031	16,340	3,583	9,366	225	13,174	7,857	3,166	37.35	19.37		
Santiago.....	191,120	a 7-12 b 7-13	38,224	27,578	3,084	14,772	1,158	19,014	19,210	8,564	50.25	31.05		
Salta.....	139,886	a 6-12 b 6-14	27,977	24,857	3,287	8,858	750	12,885	15,082	11,962	53.83	48.20		
Jujuy.....	57,277	a 7-12 b 7-14	11,455	8,900	1,617	3,961	118	5,696	5,759	3,204	50.27	36.00		
Total.....	4,688,607		937,717	744,363	50,544	325,829	77,292	453,665	484,052	290,698	51.62	39.05		
<b>TERRITORIES.</b>														
Misiones.....	41,174	6-14	8,234		3,566		186	3,752	4,482		54.43			
Formosa.....	13,560	6-14	2,712		710			710	2,002		74.09			

Chaco.....	21,423	4,284	1,950	199	1,950	2,334	54.48	
Pampa.....	60,806	12,161	2,873	41	3,072	9,089	74.73	
Neuquen.....	24,249	4,849	1,238	428	1,279	3,570	73.62	
Rio Negro.....	21,277	4,255	1,033	138	1,461	2,794	65.66	
Chubut.....	10,991	2,198	881	59	1,019	1,179	53.63	
Santa Cruz.....	4,092	818	110	.....	169	649	79.33	
Tierra del Fuego.....	1,604	320	44	.....	44	276	86.25	
Los Andes.....	2,708	541	176	.....	176	365	67.46	
Total.....	201,884	40,372	12,581	1,051	13,632	26,740	66.23	
City of Buenos Aires.....	1,084,280	216,856	90,268	45,000	135,268	81,588	37.62	
<b>RECAPITULATION.</b>								
Provinces.....	4,688,607	937,717	50,514	77,292	453,665	484,052	51.62	
Territories.....	201,884	40,372	12,581	1,051	13,632	26,740	66.23	
City of Buenos Aires.....	1,084,280	216,856	90,268	45,000	135,268	81,588	37.62	
Total.....	5,974,771	1,194,945	153,393	123,343	602,565	592,380	49.56	
<b>a Girls.</b>								
<b>b Boys.</b>								
<b>c Boys.</b>								

The course of primary instruction includes six grades, each requiring one year. This portion of the educational system, especially in the city of Buenos Aires, is well organized. Modern pedagogical methods have been introduced, and a concerted effort is being made to supply these schools with the best of material. The great need at present is the extension of primary school facilities to a larger percentage of the population. For this purpose the provincial governments will be compelled sooner or later to secure larger revenues through taxation. At present real estate bears an altogether inadequate share of the burden of taxation. A considerable increase in the rate for the support and extension of primary education is the most important problem facing the Provinces. Unfortunately, there exists powerful opposition to this step, but it is to be hoped that the constant agitation of local educational associations will gradually arouse the taxpayers to the necessity of greater sacrifice for the public welfare.

#### THE SECONDARY SCHOOLS.

Secondary education in the Argentine Republic is controlled and maintained by the Central Government. The institutions for this grade of education are known as "colegios,"<sup>a</sup> distributed as follows:

TABLE II.—*Distribution and budget of the colegios nacionales.*

No.	Colegio nacional.	Where situated.	Budget, 1908.
1	Central.....	Federal capital.....	\$154,954
2	North.....	do.....	93,757
3	South.....	do.....	122,025
4	West.....	do.....	99,983
5	Northwest.....	do.....	77,658
6	La Plata.....	Province of Buenos Aires.....	66,400
7	Dolores.....	do.....	22,550
8	Bahia Blanca.....	do.....	22,081
9	Mercedes.....	do.....	36,105
10	San Nicolas.....	do.....	22,136
11	Rosario.....	Province of Santa Fe.....	46,053
12	Santa Fe.....	do.....	38,984
13	Parana.....	Province of Entre Rios.....	38,268
14	Uruguay.....	do.....	39,035
15	Corrientes.....	Province of Corrientes.....	40,222
16	Cordoba.....	Province of Cordoba.....	59,933
17	Santiago.....	Province of Santiago del Estero.....	40,024
18	Tucuman.....	Province of Tucuman.....	48,065
19	Salta.....	Province of Salta.....	35,630
20	Jujuy.....	Province of Jujuy.....	33,084
21	Catamarca.....	Province of Catamarca.....	40,977
22	La Rioja.....	Province of La Rioja.....	34,959
23	San Juan.....	Province of San Juan.....	39,913
24	Mendoza.....	Province of Mendoza.....	53,436
25	San Luis.....	Province of San Luis.....	28,647
26	National school for young ladies.....	Federal capital.....	51,927

The course of instruction covers a period of five years and the curriculum is arranged with special reference to the needs of those intending to follow professional careers. In fact, it may be said that only those intending to follow such callings attend the "colegios."

<sup>a</sup> The institutions for women are designated "liceos."



The student usually enters these institutions at the age of 12 and is prepared for one of the university professional schools at 17.

The instability of the curriculum of these institutions has been one of the most serious obstacles to their development. Every minister of public instruction, without exception, has undertaken to make some fundamental changes. The teaching corps has not been given opportunity to become thoroughly acquainted with any one course of study. This has reacted most unfavorably on the method of teaching as well as on the preparation of the teachers for their work. While it is important that the course of study be constantly adjusted to new needs, it is far more important that the teachers be thoroughly acquainted both with the plan of study and with the content of the subject entrusted to their care.

This lack of stability has also increased the difficulties of educational control. Complaints against incompetent teachers are met with the excuse that the constant changes in the curriculum have made it impossible to develop a well-organized pedagogical plan.

The Federal Government is making every effort to place these schools on a high plane of efficiency. Splendid buildings are being erected in the larger provincial towns and the most modern equipment is being provided. The greatest obstacle to the full development of these institutions has been the difficulty of securing carefully trained teachers. The organization and method of recruiting the members of the faculty have contributed largely to this end. The subjects of instruction are divided into "catedras," or "chairs," each "chair" including a minimum of three hours of instruction per week. For each "catedra" the incumbent receives about \$130 per month. Instead of training men especially for these positions, the unfortunate plan has been adopted, especially in the smaller towns, of dividing the "catedras" amongst the resident and practicing lawyers and physicians. It is not infrequent to find a physician teaching literature or a lawyer giving a course in physics. The most serious defect of this plan is that these teaching positions are regarded as merely incidental to the incumbent's main professional work, a means of adding to his personal income without considerable effort. The result is that these schools lack a permanent professional teaching staff in close personal touch with the pupils.

Another danger to which every minister of public instruction is subjected is the tremendous pressure for appointments to teaching positions in these schools. Inasmuch as there is no special pedagogical preparation requisite for such appointments, political leaders are besieged with applications, and soon find themselves unable to withstand the pressure.

The work in the "colegios" would also be much improved through greater elasticity, combined with greater simplicity of the curriculum.

The number of subjects taught is too large and the school hours too long. The division of subjects is as follows:

TABLE III.—*Curriculum of the colegios nacionales in the Argentine Republic.*

Subject.	FIRST YEAR.	Hours per week.
I. Spanish	-----	4
French	-----	4
Argentine history	-----	4
II. Arithmetic	-----	5
Argentine geography	-----	3
III. Drawing	-----	} 6
Manual labor	-----	
Gymnastics	-----	
		26
	SECOND YEAR.	
I. Spanish	-----	4
French	-----	3
Argentine history	-----	3
II. Arithmetic and bookkeeping	-----	5
Plain geometry	-----	3
Argentine geography	-----	2
III. Drawing	-----	} 6
Manual labor	-----	
Gymnastics	-----	
		26
	THIRD YEAR.	
I. Spanish (composition and literature)	-----	3
French	-----	3
English	-----	4
American history	-----	2
II. Algebra	-----	3
Geometry	-----	3
Natural science (zoology, anatomy, physiology)	-----	4
American geography	-----	2
III. Drawing	-----	} 6
Gymnastics	-----	
		30
	FOURTH YEAR.	
I. Literature	-----	3
English	-----	3
Italian	-----	2
History (ancient, Greek, Roman, middle age)	-----	4
II. Algebra	-----	3
Physics	-----	3
Inorganic chemistry	-----	3
Natural science (physiology, hygiene)	-----	3
Psychology	-----	2
Geography of Asia and Africa	-----	2

	Hours per week.
III. Drawing -----	6
Gymnastics -----	6
	34

FIFTH YEAR.

I. Literature -----	3
English -----	3
Italian -----	2
History (modern and contemporary) -----	4
Philosophy -----	3
Civic instruction -----	3
II. Natural science (botany, mineralogy) -----	4
Physics -----	3
Organic chemistry -----	3
Geography (Europe and Australasia) -----	2
III. Physical education -----	6
	36

The examination of this curriculum discloses a tendency to place in the secondary schools advanced subjects such as psychology and philosophy, which should be reserved for the universities. Furthermore, all pupils are required to take three languages—French, English, and Italian. The result is that they acquire a smattering of each and a thorough acquaintance with none. A far better plan would be to allow each pupil the selection of one, or at most two, languages and concentrate effort on these. Under the most favorable circumstances it is extremely difficult to teach languages in the large classes of a public school. When, therefore, the attempt is made to teach three languages in a curriculum which contains from eight to twelve subjects, the result of such overcrowding can readily be foreseen.

This evil can be remedied through the introduction of the elective system, permitting each pupil, at the beginning of the third year, to select the subjects in which he is most interested, and which will best prepare him for the professional studies upon which he enters immediately after leaving the “colegio.”

The description of secondary education would be incomplete without some reference to the large number of Catholic “colegios” under the direction of the religious orders—Jesuits, Redemptionists, etc. It is to these schools that the sons of the leading families are sent. The State exercises some control, but this control is quite inadequate. The important position occupied by private schools is evident from the fact that in the city of Buenos Aires there are at the present time 450 private as compared with 190 public schools.

The secondary schools for women are known as “liceos.” Of these there are but two at present in the Argentine Republic, one in Buenos Aires and the other in La Plata. Their curriculum is even more over-



burdened, for to all the studies of the "colegios" music and domestic science have been added.

The fact that there are but two such schools in the Republic indicates that the State has but begun to face the problem of secondary education for women. Heretofore the convents and other Catholic schools have enjoyed practically exclusive control over this important branch of the educational system. It is true that girls are admitted to the "colegios" on an equal footing with boys, but the prejudice against coeducation is still so great that but few girls attend these institutions.

#### NORMAL SCHOOLS.

Upon this branch of the Argentine system American methods have exerted a real influence. The country owes the first normal school organized in accordance with modern pedagogical standards to the efforts of a group of American teachers brought to the Argentine Republic by President Sarmiento for the normal school in the city of Parana, the capital of the Province of Entre Rios. The influence of this school has been felt throughout the educational system of the country, and has contributed in no small measure toward placing the normal schools of the Argentine Republic upon their present plane of efficiency.

There are at present 35 normal schools in the Argentine Republic, distributed as follows:

TABLE IV.—*Distribution of normal schools in the Argentine Republic.*

No. of school.	For which sex or whom designed.	Where situated.
1	Men.....	Federal capital.
2	Women.....	Do.
3	Teachers of modern languages.....	Do.
4	Women.....	Do.
5	Women (San Jose de Flores).....	Do.
6	Women, La Plata.....	Province of Buenos Aires.
7	Coeducational, Dolores.....	Do.
8	Coeducational, Azul.....	Do.
9	Coeducational, Bahia Blanca.....	Do.
10	Coeducational, Mercedes.....	Do.
11	Coeducational, San Nicolas.....	Do.
12	Coeducational, Chivilcoy.....	Do.
13	Coeducational, Pergamino.....	Do.
14	Women, Rosario.....	Province of Santa Fe.
15	Women, Santa Fe.....	Do.
16	Coeducational, Esperanza.....	Do.
17	Coeducational, Parana.....	Province of Entre Rios.
18	Women, Uruguay.....	Do.
19	Women, Corrientes.....	Province of Corrientes.
20	District normal school for men, Corrientes.....	Do.
21	Women, Cordoba.....	Province of Cordoba.
22	Coeducational, Rio Cuarto.....	Do.
23	Women, Santiago.....	Province of Santiago del Estero.
24	Women, Tucuman.....	Province of Tucuman.
25	Coeducational, Monteros.....	Do.
26	Women, Salta.....	Province of Salta.
27	Women, Jujuy.....	Province of Jujuy.
28	Women, Catamarca.....	Province of Catamarca.
29	District normal school for men, Catamarca.....	Do.
30	Women, La Rioja.....	Province of La Rioja.
31	Women, San Juan.....	Province of San Juan.
32	Women, Mendoza.....	Province of Mendoza.
33	Women, San Luis.....	Province of San Luis.
34	District normal school for men, San Luis.....	Do.
35	Coeducational, Villa Mercedes.....	Do.

The regular course is four years, with two additional years for those who wish to obtain a certificate qualifying for teaching positions in the normal schools. The course of study is as follows:

TABLE V.—*Course of study in Argentine normal schools.*

Subject.	FIRST YEAR.	Hours per week.
Arithmetic-----		3
History (ancient, Greek, and Roman)-----		3
Geography (Asia and Africa)-----		2
Spanish-----		4
French-----		3
Natural science (zoology and botany)-----		3
Physics and chemistry-----		3
Pedagogy 2, practice 3-----		5
Physical training (manual labor, drawing, music, housekeeping and domestic economy, agriculture, and gymnastics)-----		10
		36
	SECOND YEAR.	
Arithmetic and algebra-----		3
History (middle age and modern)-----		2
Geography (Europe and Australasia)-----		2
Spanish-----		3
French-----		3
Natural science (mineralogy and geology)-----		2
Physics and chemistry-----		5
Pedagogy 2, practice 4-----		6
Physical training-----		10
		36
	THIRD YEAR.	
Algebra and geometry-----		3
History (contemporary and Argentine)-----		3
Geography (Argentine and American)-----		2
Spanish-----		3
French-----		3
Natural science (anatomy and physiology of man)-----		2
Pedagogy 2, practice 6, criticism 2-----		10
Physical training, etc-----		6
		32
	FOURTH YEAR.	
Cosmography-----		2
History (Argentine and American)-----		2
Literature-----		2
Moral and civic instruction-----		3
Natural science (physiology, hygiene, both domestic and of the school)-----		2

	Hours per week.
Pedagogy and psychology 4, criticism 2, practice 9-----	15
Physical training, etc-----	4
	30

SUPPLEMENTARY COURSE FOR TEACHERS IN NORMAL SCHOOLS.

FIRST YEAR.

Pedagogy (science of education, practice, and criticism)-----	8
Algebra and geometry-----	3
History of civilization-----	3
Fundamental psychology-----	4
Physiology (applied to psychology)-----	3
Literature-----	3
English-----	6
	30

SECOND YEAR.

Pedagogy (including practice and criticism)-----	10
Hygiene-----	3
General physical geography-----	2
Cosmography and topography-----	3
Psychology of the child-----	3
Literature-----	3
English-----	6
	30

This curriculum is open to the same criticism of overcrowding as the course of study in the "colegios nacionales." This is a defect, however, which can be readily remedied. On the other hand, there is noticeable within recent years a healthful tendency to give a more important place to the study of Argentine history, and to the economic, social, and political development of the country. This change is certain to exert an excellent influence upon the method and content of instruction in the primary schools.

SCHOOLS OF COMMERCE.

Commercial education is still in its infancy in the Argentine Republic as in all other sections of South America. Buenos Aires has three such schools (two for men and one for women), Bahia Blanca one, Rosario one, and Concordia one.

The courses offered are in the main elementary, similar in many respects to the curriculum of our so-called "business colleges." The course for men covers four years, that for women three years. An effort is now being made to give to women the same training as to



men, but this plan has encountered considerable opposition owing to the fear of possible competition.

Higher commercial education as a distinct branch of university training, which now occupies so important a position in the United States, has not as yet found acceptance either in the Argentine Republic or in any other South American country. Nevertheless, the schools of commerce, as at present organized, are doing excellent service both in their day and night courses. There is, however, great need of a clearer appreciation, on the part of the educational authorities, of the importance of these institutions and the necessity of devoting a larger portion of the educational budget to their development. It would, in fact, be desirable to introduce into the "colegios" a special commercial course, giving to pupils the choice between this course and that leading to law, medicine, or engineering. In this way commercial education would be placed upon a distinctly higher plane, attract a better class of students, and tend to relieve the pressure in the overcrowded professions.

#### INDUSTRIAL EDUCATION.

Although a start has been made in this direction, it may still be said that the Argentine authorities have but begun to appreciate the intimate relation between this type of education and national progress. The educational ideals which dominate the Argentine system are still largely humanistic. Spanish traditions and Spanish training have for many years obscured the essential dignity of manual labor.

At present there are but two public industrial schools for boys, one in Buenos Aires and the other in Rosario. There are, in addition, a considerable number of private industrial schools, notably the school founded in Buenos Aires by the Association for Industrial Education. Of the two public industrial schools above mentioned, the national institution in Buenos Aires, for which a new building has been constructed recently, deserves special mention. Both as regards equipment and method of instruction it is admirably organized and is rendering splendid service to the country. Pupils enter this school after having completed four years of primary instruction. The course extends over six years, two years preparatory work, two years of general instruction, and two years of specialized instruction leading to the following trades: (1) Master mechanic, (2) builder, and (3) industrial chemist.

The success of the two schools established by the National Government indicates the direction in which effort should now be concentrated. The country requires the multiplication of such schools to a far greater degree than the "colegios." If the educational system of

the country is to be symmetrically developed, national industrial schools must be established in every provincial capital.

The industrial schools for girls are known as "escuelas profesionales," and are rather in the nature of trade schools. There are four such schools supported by the National Government, three in Buenos Aires, and one in Cordoba.

#### SPECIAL SECONDARY SCHOOLS.

In addition to the secondary schools above enumerated there are a number of special schools which deserve mention, such as the National Institute for Secondary Teachers, the National Academy of Fine Arts, the Normal Institute for Physical Culture, all in the city of Buenos Aires, and the National Institute of Chemistry, situated in San Juan, the capital of the Province of the same name.

#### THE NATIONAL UNIVERSITIES.

Of the three national universities, the oldest is the University of Cordoba, founded nearly three centuries ago. In fact, it is the second oldest university on the American Continent, having been founded in 1609, fifty-eight years after the University of San Marcos, of Lima, Peru.

The other two universities, Buenos Aires and La Plata, are comparatively recent foundations, the latter having been established but four years ago.

These institutions are maintained exclusively by federal appropriations. There are no tuition fees and the matriculation and graduation fees are very low. For the year 1908 the appropriations for the maintenance of these institutions were as follows: University of Cordoba, \$276,825; University of Buenos Aires, \$449,350; University of La Plata, \$430,000.

University organization in the Argentine Republic resembles more closely the French than the American system. The faculties are to a very considerable extent independent of one another. It is true that each university has its president, but with the exception of the University of La Plata this office does not carry with it anything approaching the powers of a university president of the United States.

The absence of coordination and cooperation amongst the several faculties has been one of the fundamental weaknesses in the development of university influence in the Argentine Republic. It was with a view to remedying this defect that a different system was adopted in the organization of the National University of La Plata, established but four years ago. American university organization was used as a model after which the new institution was patterned. Instead of



making the president a mere figurehead he was vested with supervisory powers over all the faculties. The result has been a unity of university effort which neither of the older institutions has been able to attain.

In each of the three universities there is a faculty of law, a faculty of philosophy and letters, a faculty of natural sciences, and a faculty of physical and mathematical sciences. Cordoba and Buenos Aires have also a medical faculty.

The material equipment of all the professional schools, especially the medical school of the University of Buenos Aires, is excellent. Instruction in all the faculties, however, suffers severely from the lack of contact between student and professor. Most of the members of the instructing corps—and this is particularly true of the law faculties—interpret their duties narrowly, confining themselves to formal lectures, with examinations at stated periods. Thus the educational value of close contact between student and professor, upon which so much stress is laid in the United States, is entirely lost. Too much stress is laid on the final examination tests, whereas the work of the student during the college year is almost totally neglected.

In this respect, also, the policy of the National University of La Plata, under the wise guidance of its present president and vice-president, marks a distinct step in advance. Students are required to keep their work at a certain standard of efficiency, professors are encouraged, in fact required, to enter into close touch with their students. The result is that there is gradually developing an esprit de corps which is having a most salutary influence on the growth of this institution.

The National Government has been most liberal with its three universities, especially within recent years. Plans have been matured for magnificent new buildings for the faculty of physical and mathematical science (which includes engineering) of the University of Buenos Aires; a great new hospital costing \$6,000,000 is to be erected as an adjunct to the medical school. Cordoba is to have a series of new buildings to commemorate her tercentenary.

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#### CHILE.

Educational progress in Chile presents a striking contrast with the Argentine Republic. In the Argentine Republic the democratic development of the country since 1850 led to the early development of primary education. Secondary and university instruction received but little attention. It is true that the Argentine educational system remained in a primitive state until the presidency of Sarmiento. Nevertheless, even up to his time more attention was given to primary



than to secondary schools. The aristocratic social organization of Chile, on the other hand, led to the concentration of effort on the development of the secondary schools. As a result, Chile possesses the best "liceos" and "institutos" in South America. Unfortunately, the system of primary education was neglected for many years and resulted in a degree of illiteracy amongst the masses which made impassable the chasm between social classes. The country is now suffering from the results of this long-continued neglect. With the industrial progress of the country the economic condition of the laboring classes has been steadily improving, but owing to their ignorant condition and total lack of preparation, the higher wages have in many cases resulted in degeneration rather than progress. The primitive wants of the agricultural laborers were satisfied by the lower wage, and the surplus has been used, to a very considerable extent, in an increased indulgence in spirituous liquors. Saving is almost unknown to the Chilean laborer, so that the increased wages have not led to a more careful provision for the future of the family.

On the other hand the increased wages, in bettering the situation of the laborer, has also given rise to a spirit of discontent, a desire for a larger share in production. The ignorance of the laborer makes him an easy prey to demagogic agitation. It is not surprising, therefore, to find the violent outbreaks of discontented laborers which have occurred from time to time within late years, and of which the most recent instance was the strike of the nitrate workers in Iquique, which led to the mowing down of 500 men and women with the machine guns of the troops.

The problem of overwhelming importance now confronting Chile is the improvement and extension of the system of primary education. It is only through the education of the masses and the consequent bridging over of the tremendous chasm that now separates the wealthy and educated from the uneducated and poorer classes that Chile will be able to retard the growth of discontent.

Her leading statesmen are fully alive to the dangers of the present situation, and it is most gratifying to find the concentration of effort in the last few years on the development of the system of primary education. Rapid progress is now being made, although the decline in national income, due to the economic crisis through which the country has been passing, has given a temporary setback to the movement.

#### PRIMARY EDUCATION.

The Chilean educational system in all its branches is national in scope and organization, that is to say, is maintained by the national treasury. No local taxes are levied for educational purposes and the

local authorities have no voice in the administration of or control over the system.

Although this lack of local cooperation in the development of the educational system has been unfortunate in many respects, it was inevitable in the absence of a well-defined public opinion upon which a local system might depend.

In marked contrast with the Argentine system, the organization of primary education in Chile is highly centralized. Teachers are appointed and paid by the Central Government and central supervision is maintained over every detail of educational organization. While subject to the final authority of the President of the Republic and the minister of public instruction, the direct control over the system of primary instruction is exercised by an inspector-general.

It is a curious fact worthy of note, for it throws an interesting side light on Chilean social conditions, that the secondary schools, or "liceos," have gradually invaded the field of the primary school through the establishment of preparatory courses. These institutions depend upon a totally different educational authority—the council of public instruction and the president of the University of Chile.

The preparatory courses of the "liceos" are attended by the sons of the well-to-do families, whereas the regular primary courses are attended by the poorer element of the population. Thus, in fact, two systems of primary education exist side by side, dependent upon different educational authorities and attracting totally different classes of the population. For this reason the primary schools have not contributed as much as might be expected toward breaking down the class barriers so marked in Chilean society.

During the past fifteen years the leading statesmen of Chile have realized that this neglect of primary instruction is a real menace to the stability and orderly development of the country. The social organization of Chile is still fundamentally aristocratic. Until comparatively recent times the bulk of the population, especially the agricultural laborers, were in a condition of peonage. The industrial advance of the country, together with the rising wage scale, has produced in the laboring classes a consciousness of power. The illiteracy of the great mass of the laboring classes greatly increases the dangers of the situation. The extension of primary instruction has therefore become one of the conditions prerequisite to orderly national advance. The country must now prepare itself to make every sacrifice for this purpose.

During the past sixteen years the primary-school facilities have increased as follows:

TABLE VI.—*Growth of primary schools in Chile.*

Year.	Number of schools.	Teachers.	Registration.	Average attendance.	Relation of attendance to registration.
					<i>Per cent.</i>
1891.....	1,182	.....	97,452	64,737	67.8
1892.....	1,156	.....	100,554	71,179	70.7
1893.....	1,222	2,042	102,711	72,899	70.9
1894.....	1,224	2,070	117,489	72,925	62.1
1895.....	1,248	2,145	114,565	71,901	62.7
1896.....	1,269	2,169	111,361	81,168	72.9
1897.....	1,321	2,268	109,058	65,507	60.0
1898.....	1,368	2,308	99,889	65,619	65.7
1899.....	1,403	2,299	106,348	70,607	66.4
1900.....	1,547	2,692	115,281	72,761	63.1
1901.....	1,700	3,080	124,265	79,666	64.1
1902.....	1,821	3,426	145,052	97,692	67.3
1903.....	1,861	3,608	167,028	108,562	65.0
1904.....	1,942	3,999	159,297	107,905	67.7
1905.....	2,156	4,531	170,827	106,041	62.3
1906.....	2,233	4,639	178,402	105,501	59.1
1907.....	2,319	3,997	197,174	121,176	61.4

From this table it will be seen that the attendance in 1907 shows an increase of 15,675 over 1906.

The curriculum of the primary schools in Chile is considerably less overburdened than in the Argentine Republic. The system has, furthermore, been considerably improved by the introduction of manual training in 1899. This was begun on a small scale in 10 schools, and has gradually been extended until in 1907 there were 120 workshops installed in as many public schools. In all the girls' schools sewing has been made an integral part of the curriculum. A new plan which is about to be put into operation is to permit pupils to devote the last of the six years of primary instruction to special training in the mechanic arts.

#### NORMAL SCHOOLS.

In the Chilean system the normal schools and the primary schools are dependent upon the same educational authority—the inspector-general of education. There are at present 15 normal schools—6 for men and 9 for women.

Owing to the low salaries paid to primary-school teachers, the normal schools are neither as numerous nor as largely attended as the educational needs of the country require. In 1907, it is true, salaries were considerably increased,<sup>a</sup> but considering the high cost of living in Chile, the salaries are still far too low. Calculating the “peso” at

<sup>a</sup> Owing to the financial crisis the increase was paid to but a portion of the teachers.



the present rate of exchange of 25 cents, the remuneration is as follows:

Teachers:	Salary per year.	Assistants:	Salary per year.
First class.....	\$450	First class.....	\$300
Second class.....	300	Second class.....	254
Third class.....	270	Third class.....	225
Fourth class.....	240	Fourth class.....	180

After ten years of service the teacher is entitled to an increase of 20 per cent.

In the 9 normal schools for women the matriculation in 1907 was 1,255, with an average attendance of 1,029; in the 6 normal schools for men the matriculation was 722, with an average attendance of 580.

SECONDARY SCHOOLS.

The secondary schools, or "liceos" as they are called, are under the control of a national council of education appointed by the President of the Republic, of which the president of the national university is a member ex officio.

There are in all 39 such establishments for boys and 30 for girls, each with its respective preparatory course.<sup>a</sup>

The matriculation and attendance are as follows:

	Registration.			Attendance.		
	Preparatory.	Regular.	Total.	Preparatory.	Regular.	Total.
Liceos for boys.....	3,991	5,311	9,302	3,341	4,555	7,896
Liceos for girls.....	2,628	2,182	4,810	2,060	1,779	3,839

The development of secondary schools for girls has been extraordinarily rapid considering the fact that no attention was paid to this branch of the system until 1877.

Although technically classed as a part of the national university, the pedagogical institute may best be considered in connection with the system of secondary instruction, for it is in this institute that teachers for the "liceos" are trained. Founded twenty years ago, this institute was at first intended exclusively for male pupils, but was later on made coeducational. During this time 310 secondary school teachers have been graduated. The number of students has increased rapidly. In 1907 there were 205 students registered.

<sup>a</sup> The Internado Barros Arana for boys (Santiago) and Liceos Nos. 4 and 5 for girls (Santiago) have no preparatory courses.

The curriculum of the Instituto Pedagógico is planned to prepare specialists. It is therefore divided into seven distinct sections: (1) Spanish, (2) French, (3) English, (4) German, (5) history and geography, (6) mathematics and physics, (7) biology, chemistry, and mineralogy.

All students are required to take pedagogy, experimental psychology, logic, ethics, the history of philosophy, civics, and educational organization and legislation. The full course covers a period of four years.

The plan of study in this institution, as well as the method of instruction, are distinctively German. In fact, the entire faculty, with the exception of the director, has been recruited from the German secondary schools. This is probably the best instance of that quiet and unpretentious extension of German intellectual influence which is far more significant than her commercial advance. The German Government has been deeply interested in meeting every request of the Chilean people for competent teachers. At comparatively moderate salaries Chile has secured from Germany a group of teachers who now dominate the system of secondary education, and their influence is also being felt throughout the system of primary instruction.

This readiness of Germany to be of service contains a lesson of much importance to the United States. There has been no lack of requests on the part of the Latin-American governments for American teachers, but there has been considerable difficulty in meeting these requests, owing in part to the question of language, but mainly to the lack of adaptability of the average American teacher. Germany is performing a great service to the countries of Latin America—the kind of service that establishes her influence far more effectively than any attempt at extension of dominion.

#### SPECIAL AND TECHNICAL SCHOOLS.

Commercial education is still in its infancy in Chile. As a result of long-continued agitation on the part of a group of public-spirited citizens, an excellent commercial school was established in Santiago in 1898. Its success has been such that an appropriation was secured from the national government for a new building. Similar schools, but on a more modest scale, have been established in Valparaiso, Vallenar, Iquique, Coquimbo, Talca, Concepción, Antofagasta, and San Carlos.

The total registration at these schools in 1906 was 1,453, with an average attendance of 1,080. The total outlay for the year was nearly \$100,000.



The entrance requirements to these schools are the same as for the "liceos," and the regular course covers a period of three years. In addition, there are special courses of two years for clerks and accountants. Although the first steps toward the development of a system of commercial education have been taken, the idea of higher commercial education has as yet made but little headway.

The present commercial courses are, in the main, of an elementary character. The students enter at the age of 12 and usually leave at 14 or 15. The further development of the system is a matter of as much importance to Chile as to the Argentine Republic. On all sides one hears complaints of the unwillingness of the sons of the better families to enter upon business careers. Higher commercial education will tend to counteract the tendency toward the overcrowding of the professions.

#### INDUSTRIAL EDUCATION.

In the school of mechanic arts, situated at Santiago, an important step has been taken toward the establishment of a comprehensive system of industrial education. To this great school pupils from all parts of the country are sent. The courses are eminently practical and the training thorough. The great service performed by this school indicates the necessity of establishing similar institutions in all the larger towns of the republic. In fact, it may be said of Chile, as of all the other countries of South America, that the educational problem of overshadowing importance at the present time is the extension of industrial education and technical instruction. This necessity is due in part to the fact that the present scholastic system directs far too large a proportion of the young men into the study of law and medicine.

A beginning has been made in Santiago toward the establishment of industrial training for girls. As yet the industrial opportunities for women are exceedingly limited. The Santiago school has, therefore, confined its attention to the training of young women for dress-makers, hatmakers, and the minor commercial positions. The industrial emancipation of women is, however, a most important factor in the social progress of the country, and it is through schools such as these that this emancipation will be effected.

#### PRIVATE SCHOOLS.

The description of the school system of Chile would be incomplete without some reference to the large number of private schools of both primary and secondary grade. Many of these are subsidized by the Government, others are maintained by the Catholic Church or by



private associations. The number of private primary schools is indicated in the following table:

	Number of schools.	Number of teachers.	Pupils matriculated.
Private primary schools:			
Subsidized by the Government.....	196	634	26,564
Not subsidized.....	176	326	11,601
Total.....	372	960	38,165

*Primary school census, 1906.*

Public schools.....	103,685
Private schools.....	38,165
Military schools (army and navy).....	4,212
Total.....	146,062

During the same year (1906) the Government granted subsidies to 44 private secondary schools.

UNIVERSITY INSTRUCTION.

University instruction has been more fully developed than any other portion of the educational system. The council of public instruction, under whose immediate charge the university is placed, has wielded great influence, and has always been able to secure relatively large appropriations for university instruction. The administrative head of the university is the president, or "rector," as he is called, who is at the same time ex officio member of the council of public instruction.

At the present time the university offers courses in law and political science, medicine, pharmacy, dentistry, engineering, architecture, and fine arts. The pedagogical institute also forms an integral part of the university organization. The teaching corps, number of students, and budget are indicated in the following table:

TABLE VII.—*Instructors, students, and budget of the different faculties of the University of Chile.*

Faculty.	Instructing corps.	Students.	Budget.
Law and social sciences (including special course in city of Concepcion).....	44	491	\$21,000
Medicine and pharmacy, and nurses' training school.....	32	294	55,360
Dentistry.....	5	89	8,800
Engineering.....	19	149	29,646
Architecture.....	15	43	12,075
Pedagogy.....	12	221	26,983
Fine arts.....	11	135	7,530
Total.....	138	1,422	161,394

University instruction in Chile suffers from the serious defect of an overemphasis—in fact, almost complete dependence—upon examinations as a means of controlling the work of the students. There is little or no contact between student and professor, and as a rule the student interprets his university life as a series of lectures, followed by examinations. The result is a lack of distinctive student life, which is the most serious obstacle to the development of the broadest university influence.

Dr. Valentin Letelier, who was until recently rector, made a strenuous effort to remedy this defect. He impressed on the students the essential unity of university life and the necessity of closer cooperation amongst the students of the different departments. Probably the most important step taken has been the establishment of a student center, or club house, adjoining the university building. Doctor Letelier is keenly alive to the necessity of developing a distinctive university life which will include the entire student body. He has done a service to higher education in Chile the value of which will only be fully realized by future generations.

One of the most important changes which the present situation calls for is the recognition of membership in a university faculty as a distinctive career, commanding and demanding all the time and attention of the incumbent. At present a university professorship in Chile is looked upon in much the same way as in the Argentine Republic—a mere incidental activity to current professional activities. The result is a lack of esprit de corps, which has been a serious obstacle to the advance of higher education in Chile.

The description of higher education would be incomplete without some reference to the Catholic University situated in Santiago, which offers courses in law, civil and mining engineering, architecture, fine arts, and agriculture. The law school has 185 students; the engineering school, 396; the agricultural school, 12; and the school of fine arts, 55. In all of these departments the equipment is excellent, and the teaching corps has been selected with great care.

The Catholic University occupies an unique position. Its main supporters are the members of the conservative party. Inasmuch as the wealthier elements of Chilean society are to a very large extent affiliated with this party, the donations and bequests reach a large total each year. In fact, this is one of the few instances in Latin America in which a great national institution is supported exclusively by private contributions. The rivalry existing between the national and the Catholic universities has proved of real benefit to both, protecting them against the stagnation and fossilization which is the inevitable consequence of monopoly.

# APPENDIXES.

[The two following papers, which have been prepared in this bureau, are appended here for the purpose of supplementing and illustrating with further details Doctor Rowe's account of educational progress in the Argentine Republic and Chile.]

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## APPENDIX I.

### HISTORICAL SKETCH OF EDUCATION IN THE ARGENTINE REPUBLIC.<sup>a</sup>

By Prof. CARLOS O. BUNGE, of the University of Buenos Aires.

CONTENTS.—I. Education during the colonial epoch. II. Education of the Indians. III. The University of Córdoba. IV. Education in Buenos Aires and the coast during the nineteenth century. V. University studies in the second half of the nineteenth century. VI. Character of modern instruction in the Argentine Republic.

#### I.

*Education during the colonial epoch.*—The conquest and colonization of Spanish America were effected at a time when the divine right of kings was an unquestioned fundamental dogma of the political creed of European nations. The principal object of all the laws relating to the Spanish colonies and their institutions was to maintain the new lands and peoples under the temporal and, to a certain extent, under the ecclesiastical dominion of the Catholic King.

Theoretically, the supreme object of the conquest and of the maintenance of sovereignty over the subjugated Indians was their conversion to Christianity and the salvation of their souls. It was attempted, first of all, to create a new Catholic population under the double authority of the Spanish Crown and the pontificate.

What with its incessant wars of religion, in the expulsion of the Arabs and Jews, and in the extirpation of heresy, the mother country found itself at the time of the conquest, in the sixteenth century, in a precarious situation, both economical and industrial. Its necessities kept on increasing, while its resources diminished. Under such circumstances the eagerness with which the Royal Government, and private individuals as well, sought the riches of the New World can be readily understood. The monopolistic system which was then established, which now seems to us so unjust, was imposed upon the Government by the fatality of history. America being regarded as an immense trading station, the army, the civil officers of the Government, and the commercial houses all concerned themselves but little with the intellectual culture of the new colonies. It might even be said that the ignorance of the natives and of the creoles was regarded as a favorable circumstance for keeping the colonies submissive under the severe political and economical regimen to which they were subjected. Yet, aside from its lofty ideal of evangelizing the Indians, it was also for the interest of the Crown to educate the creoles, if not from the ampler and more generous point of view of providing them with superior culture, at any rate from the selfish motive of educating them in political and religious obedience, so as to keep them more easily under the yoke.

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<sup>a</sup> Translated (with some omissions) from *El Monitor de la Educación Común*, October 31, 1908.



The prevailing ideas of the epoch and especially the unequivocal support of the church sanctioned these political views of the Spanish monarchy, and in consequence colonial education assumed a pronounced religious character. The papacy and the King in Europe, and the regular and secular clergy in America, supported by the Spanish officials, were the factors of all education during the Spanish domination.

The priests and missionaries who accompanied the conquerors, inflamed with apostolic zeal, devoted themselves ardently to the conversion of the natives, and after the conquest was assured and Spanish settlements were established they opened their cloisters for the education of the creoles. Still later they took measures to form a local clergy in the colonies which should be graduated from universities like those in the Catholic countries of Europe. The Crown favored this initiative of the church, which was undertaken especially by the missionary orders, by the Jesuits above all, but also by Franciscans and Dominicans. A series of statutes and decrees was promulgated by the council of the Indies in which the system of education founded by the clergy was approved and fostered, and regulations were formulated for its government. The King, in virtue of his right of patronship, constituted himself the supreme head of religious instruction, although he respected the autonomy of the establishments and institutions conducted by the clergy. The apostolic approbation of the Pope was always sought in founding universities.

The Laws of the Indies contain the royal decrees relating to what would now be called public instruction.

There was no methodical plan, but some form of instruction was instituted in each locality according to its condition and resources. The classical forms of the teaching bodies of the middle ages, which required that the instruction should be strictly dogmatic in its character, were recognized in these decrees. In such distant lands and among such a wild and turbulent mixed population as they contained a severe discipline in habits of obedience to the Crown and church was indispensable. The Government therefore, always fearful of insubordination, reenforced by its authority the educational system based upon dogmatism and obedience which the Jesuits had already established in Spain and in nearly all the Catholic world.

The Government's first case was to see that the sons of caciques who would have to govern the Indians should be taught the holy Catholic faith. Colleges were established for this purpose in the different colonies, in which the children were placed under the care of priests, who taught them good manners and the Spanish language, and who later opened schools for all Indian children for instruction in the gospel, where they learned reading and writing besides the catechism. Among the ecclesiastical institutions which took charge of the education of the Indians the best organized and most important were those called "reducciones," which were institutions conducted by the Jesuits where converted Indians were formed into docile colonies of agricultural laborers, whose daily routine was minutely prescribed for them by their religious masters. These institutions, which were established in the early colonial period, reached a high degree of development in the seventeenth century, but when the priests were expelled by King Carlos III at the close of the eighteenth century, the Indians, being deprived of their teachings, soon relapsed into their natural condition of savagery, thus showing themselves incapable of profiting, unsustained, by the Catholic culture they had been accustomed to receive. Primary instruction—reading, writing, and religion—was provided for in the mission schools and certain small colleges. What would now be called secondary and superior instruction was given in the universities. The colonial universities

may be divided into two classes—the official institutions, which were founded by the Crown, like those of Lima and Mexico, and the private institutions, which were established by the regular or secular clergy, were then authorized by the Pope, and were recognized by the Crown through concessions which were prolonged indefinitely. The University of Cordova belongs to this last category. It was the highest and most typical exponent of the colonial culture of Paraguay, Tucuman, Buenos Aires, and the Banda Oriental of Uruguay, which together constituted in the later period of Spanish rule the large and rich vice-royalty of Rio de la Plata.

The universities, like the lower schools, grew up under the shadow of the church. They were, to a certain extent, autonomous and of a pronounced ecclesiastical character, while the Crown regulated their minutest affairs by royal decrees. The viceroys could not intervene in the selection of rectors or professors or in the granting of decrees. The former, elected by the body of graduates, held office for one year, but were eligible for reelection. The professors were of two categories, those who held their positions during good behavior and those whose terms lasted four years. The instruction was of a pronounced theological character. The principal object of the universities was to graduate a creole clergy who should keep the principle of the divine right of kings alive and strong in the colonies.

## II.

*Education of the Indians.*—As was remarked above, theoretically the lofty aim of the Spanish conquest of America was the conversion of the Indians. But this ideal did not attain the desired result. The Indians did not mix freely with the Europeans and always remained, at bottom, essentially anti-Christian. The task of the evangelizers encountered an insuperable obstacle in human nature itself. For notwithstanding that Christianity proclaims the equality of mankind, modern biological theories are far from regarding this equality as absolute or even evident. History records the fatal disappearance or submergence of inferior races before their conquerors, their remnants appearing as castes or slaves. Force was always the predominating element in conquest, while persuasion played a secondary part. The contrast between the barbarism of most of the American Indians, outside of Mexico and Peru, and the civilization of the Spaniards was too great, added to the radical difference of race, to be easily obliterated, so that the conquered people were forced to remain in an inferior condition. The natives, for the most part, accepted their condition of vassalage as inevitable, and the position of the missionaries who, like Las Casas, sincerely believed in and preached the Christian doctrine of universal brotherhood, was thus rendered doubly difficult by coming in conflict with the interests of the conquerors on the one hand and the obvious inferiority of race and the acquiescence of the conquered on the other. Under these circumstances the missionaries could, at best, only assuage the severity of the servitude of the conquered races and lighten their yoke. This they accordingly effected through the Jesuit system of semireligious colonies referred to above, and the general Christianizing of the indigenous population by the other Catholic clergy. As proof that the Indians were not the equals of Europeans, reference is made to their want of initiative, activity, and intelligence, and to the fact that after the expulsion of the Jesuits the mission Indians found themselves more helpless than ever. Instead of augmenting their natural forces the Jesuit system had debilitated them. The same Christianity which added strength to the conquerors had only enervated the unfortunate conquered people. In a word, experience has demonstrated that the pure Indian was not Christianizable. Nevertheless, evangelization produced certain good results in



the mixed bloods, descendants of the Spaniards and Indians, giving them a sense of cohesion and social harmony which facilitated the introduction in later times of the democratic idea. Without knowing it, those persevering and unpretending missionaries of the early days, who preached the gospel to savages in virgin forests, were contributing their mite to the future growth of democracy and lay civilization among the free peoples of Spanish America.

### III.

*The University of Cordova.*—In the early part of the seventeenth century the Jesuits, who were established in the city of Cordova, founded there a college of their order called the "Colegio Maximo." In 1613 the Bishop of Tucuman granted the society funds for the purpose of widening the scope of the institution and giving higher instruction in Latin, the arts, and theology to the students of the Colegio Maximo itself, as well as to students who might come from Paraguay and elsewhere. The Colegio Maximo was opened under the new régime in 1614, and after it had acquired reputation it was raised by pontifical and royal decrees to the dignity of a university, until in 1622, by order of Philip III, it was authorized to grant the degrees of bachelor, licentiate, master, and doctor. The university was divided into two faculties, one of arts or philosophy and the other of theology. The faculty of arts comprised logic, physics, and the metaphysics of Aristotle, the courses occupying three years, after which there were two years of practice for the students, during which they were obliged to give lectures. The course in the theological faculty was four years, which was also followed by two years of practice or probation. The method of study was the mnemonic or the purely scholastic. In the three courses of the faculty of arts the instruction was cyclical; that is to say, one of the courses of study was completed and then dropped, and then another was taken, to be completed and dropped in its turn. The great defect of this system was, however, corrected by the two years of review or repetition, when the students were required to lecture. The philosophy studied at the university was the peripatetic or Aristotelian. Theology was taught from the *Summa Theologiæ* of St. Thomas Aquinas and the *Liber Sententiarum* of Peter Lombard. To this was added the vast work of Suarez, comprising the exposition of all the doctrines of the Society of Jesus. The studies of the faculty of arts were preparatory to those of the faculty of theology, yet it furnished the degrees of bachelor, licentiate, and master of arts. The degree of bachelor was conferred after completing the three courses of study mentioned above and passing a public examination in logic. For a degree of licentiate in arts, which followed in order, a year of lecturing was required, followed by a public defense of theses in the three studies, and for the third degree, that of master in arts, two years of probationary lecturing, followed by an examination covering the whole field of philosophy, were required. There were also three grades of degrees in theology corresponding to those in arts, viz, that of bachelor, licentiate, and doctor. The granting of these degrees was preceded by severe examinations held in public, and all the ceremonies were conducted with much solemnity. They were occasions of pompous processions, in which the civic authorities took a conspicuous part with the ecclesiastics and the officials of the university, in escorting the candidates to the church and back to their dwellings after the bestowal of the degrees. Even the description of the official costumes prescribed for the students and for the candidates and successful graduates, besides the clergy, on these occasions is given in detail.

The faculty of civil law was added to the university course in the eighteenth century after many difficulties, and authority to grant degrees in law was con-



ferred upon the university in 1796, in consequence of which the law faculty gradually supplanted its elder theological brother in importance and influence. There were two Jesuit "colegios," or secondary schools, connected with the university, and after the expulsion of the Jesuits by Carlos III in 1767 both the university and its colleges were given over to the secular clergy, and subsequently to the Franciscan order, in whose charge it remained until it was secularized by decree of the King in 1800. This order was not, however, carried into effect until 1808, when the university began its new career under lay auspices and with a new system of instruction which lasted during the first half of the nineteenth century. This course of instruction comprised four faculties, viz, grammar, philosophy, theology, and law. The philosophical faculty included four subdivisions, viz, (1) logic and metaphysics; (2) moral philosophy; (3) arithmetic, geometry, trigonometry, including surveying, and algebra (equations of the first degree); (4) physics, in which study it is to be noted that the experimental method was to be preferred to the systematic. The studies of theology and law followed the course in philosophy. The university maintained its aristocratic character until its "nationalization" (that is, until the national government assumed charge of it) in 1854. Up to that time purity of blood was a prerequisite to admission, and persons of mixed negro and white blood in particular were denied admission. Upon the declaration of independence in 1818 the National Government, with its seat at Buenos Aires, declared itself the successor of the Spanish Crown in respect to authority over the university, and except an interval from the disturbances of 1820, when the control was assumed by the provincial government, until 1854, when the National Government resumed authority, the university has remained under the National Government ever since. The curriculum as rearranged was quite modern in its character and consisted of a preparatory course, so called, comprising Spanish, Latin, French, religion, geography, and practical arithmetic, which was followed by the courses of the regular faculties, philosophy (logic, ethics, mathematics, physics, and astronomy, one year each), theology (four years), and law (four years). The "cyclical" character of the course in philosophy, as the author of the article here translated calls it, is criticised by him as being a vicious system by which a student is led to follow a given study (logic, or ethics, or physics, etc.) for a year and then forget it.

#### IV.

*Education in Buenos Aires and the coast, the viceroyalty of Rio de la Plata, during the nineteenth century.*—Both the Spanish population and the Spanish culture arrived at the territory which was afterwards known as the viceroyalty of Rio de la Plata in two distinct currents, one coming from Peru on the Pacific side of the continent, while the other reached the Atlantic coast directly from Europe. Only the first of these two currents was of importance as far as influence upon education is concerned during the seventeenth and eighteenth centuries. Crossing the northern part of the territory it ramified from Cordova, which city became its center, to Corrientes, Paraguay, and the boundary of Brazil. Its typical and important institutions were the University of Cordova and the missions of Paraguay.

The other stream of colonists, which came directly from Spain to the coast country (the "litoral"), was less important from the point of view of education. They were, for the most part, rough "hidalgos" and military men who had no idea of establishing schools. The few and scattered centers of instruction which were established among them were due to the northern immigrants with whom came the religious congregations and the secular clergy as

well. Later, at the end of the eighteenth century, during the reign of Carlos III, colonization from the Atlantic side increased in strength, but owing to the liberal political and religious ideas of that period, the new colonists were less under the religious influences than those who had arrived from the north. Nevertheless, the Viceroy Vertiz, who represented in Rio de la Plata the progressive politics of Carlos III, endeavored to establish a university in Buenos Aires, but although his project received the royal assent in 1778, it was not realized until much later. Meanwhile a college was established under the name of San Carlos in a building belonging to the Jesuits, in which instruction was given in grammar, rhetoric, philosophy, theology, and canon law after the old scholastic method, which was not in accordance with the new spirit of the times, and accordingly, after languishing some years, the college was suppressed definitely after the revolution of 1818. Vertiz also founded a medical school in 1780, while at the same time the nautical school and the school of geometry, in which architecture, perspective, and drawing were also taught, were established, both of which, however, came to a premature end in 1802. About this time, also, that is to say, previous to the nineteenth century, it is worthy of special historical interest to record, the revolutionary leader Belgrano <sup>a</sup> desired to establish free primary schools besides special schools of agriculture, mathematics, and drawing, but his ideas were not then realized. The university of Buenos Aires owes its origin to the union of several struggling or moribund institutions, including those just mentioned and two or three similar colleges, which was effected in 1821. The university included in the scope of its activities the entire official instruction of the Province of Buenos Aires from the elementary schools to those of theology and jurisprudence. After the elementary schools came the department of secondary or preparatory studies, which included Latin, French, logic, metaphysics and rhetoric, physics and mathematics, and political economy. In the department of mathematics were included drawing and descriptive geometry with applications. The medical department included the three chairs of medicine, surgery, and clinics, both medical and surgical. The department of law had two chairs, one of natural law and the law of nations, and the other of civil law. The department of theology was left without specific provision until 1825, when the chairs of Greek and Latin, of evangelical morals and of ecclesiastical history and discipline, were founded. From the foregoing the practical and positive spirit in which the university was founded will be seen. The preparatory studies and the medical and law departments continued to flourish and exert a beneficial influence upon Argentine culture, while theology and mathematics did not acquire an equal importance or influence. The university languished, however, under the rule of Rozas, who even permitted the return of the Jesuits and commanded the rector of the university to admit them to their ancient seat, until his power fell in 1852, after which the university was reorganized upon a wider scale in accordance with modern ideas. The plan of the secondary studies was enlarged, the course in medicine was extended to six years, and in 1863 a faculty of exact sciences was added, besides which enlargement of the university itself the government of the province established certain national colleges of secondary instruction under the direction of the university. Since 1882 the functions of the university have been conducted under the four faculties of humanities and philosophy, of medicine, of law and social science, and of mathematics and the physico-natural sciences. Each faculty has its own teaching body and government and there is besides a superior council, under the presidency of the rector, composed of

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<sup>a</sup> Belgrano, an Italian by origin, and a man of wealth, had received his education at the university of Salamanca.



delegates from the several faculties. Since 1885, the date of the passage by the national congress of the university law which regulates both the university of Cordova and Buenos Aires, both institutions have ceased to give secondary instruction and have devoted themselves exclusively to superior studies, resembling in that respect the new university of La Plata, founded in 1906.

## V.

*Education in Argentina in the second half of the nineteenth century.*—Since 1852 the National Government of Argentina has been actively engaged in reorganizing education throughout the country. Primary schools were established in various places, but the main efforts of the Government were directed toward improving secondary education, which was effected by establishing a number of national colegios, one in each provincial capital, each successive minister of public instruction—and there were frequent changes in the ministry between 1852 and 1884, when the present course of studies was established—having a plan of his own. Since the latter date secondary instruction is confined to one national colegio, in which the character of the instruction is modern and encyclopedic, while its ethical character is civic and democratic and the instructors are laymen. The same practical character is now given to primary instruction. Sarmiento, in his capacity as statesman and writer, turned to North America to find models for his country to follow, and in this he was followed by other patriots, conspicuous among them being Juan María Gutiérrez, in consequence of whose efforts the Argentine schools now have a marked democratic and practical stamp. The seed which those statesmen planted fell upon a rich and responsive soil and is now bearing abundant fruit.

## VI.

*Character of modern Argentine education.*—Modern Argentine education is the result of a violent reaction against the strong religious and monarchical spirit which dominated the old régime, in education as well as in politics, and from its inception it manifested the individualistic and democratic tendencies of the philosophy of the eighteenth century. Two orders of ideas influenced the molding of the new nationality, the modern European humanistic teachings, and North American constitutionalism. The new European humanistic doctrines revealed themselves, although feebly, in the reforms of Carlos III, but acquired strength and body in the minds of the revolutionists. In spite of the prohibition by the Spanish Government of the introduction of books which would disseminate the new philosophy, the new ideas crossed the seas like the winds themselves, so that although the patriots could not find opportunities to read the original works of Montesquieu, Rousseau, and Voltaire, or the encyclopedists, the doctrines of these writers became known to them, inspired their thoughts, and determined their actions. Moreno, Monteagudo, Belgrano—all the great leaders and thinkers of the Argentine revolution—were more or less romanticists and Jacobins. After the revolution the patriots found the more typical and perfect realization of their political ideas in the North American Republic. That democratic republic, therefore, became their exemplar and a model of organization for them to copy. The ideals of a republic, of liberty, and of the rule of the sovereign people represented their highest political aspirations. American independence coincided very fortunately for their purposes with the triumph of the French Revolution.

With these elements and ideas the new nation was radically liberal and republican, and the population, although not really European by race, and not



sufficiently educated to make a proper use of republican ideas and institutions, which are difficult for novices to comprehend at first, still promptly assimilated the fundamental ideas of the new political organization, for a faculty of assimilation and a passion for progress have always been characteristic of the creole portion of the people. From the new culture could only result a democratic tendency and a profoundly practical spirit which affected education as well as politics. The scholastic spirit disappeared with the revolution, instruction ceased to be formal and abstract, and the classics were no longer cultivated with such zeal or so generally as in former years, but education followed the modern, practical tendency of the period, substituting the physico-natural sciences and modern languages for the old classical courses. The aim is no longer to produce men of erudition, but enterprising citizens.

Discipline has been and still is defective in Argentine institutions of education. There is much insubordination among the students, the explanation of which is to be found partly in the social spirit, and partly in the character of the creoles and the prevailing Jacobin ideas. But it is a mistake to complain of a fault which merely demonstrates the existence of an independent and manly spirit. When that spirit is subject to proper discipline, it will produce one of the most intelligent and generous peoples on earth.

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## APPENDIX II.

### A BRIEF SURVEY OF EDUCATIONAL CONDITIONS IN CHILE IN 1908.

[Population, 3,399,928 in 1905.]

The last report of this bureau contained a notice of the decided tendency to utilitarian or "modern" studies in higher education which Chile, in common with the other Spanish South American States, has developed in recent years. This tendency has arisen in response to a demand for studies of a practical and positive, or objective, nature in place of the old subjective introspective culture. The modern tendency is due to the rise of the industrial democracy during the latter half of the nineteenth century, and has been conspicuous in Europe as well as in the United States and South America. Further illustration of this tendency in Chile is offered by the report of the minister of public instruction, presented to the National Congress in 1908, which gives a summary view of the condition of state education in Chile from the primary grades to the university. This order of arrangement—beginning with the lower grades and proceeding to the higher—which in itself is significant of a change of view in recent years, is followed in the present abstract.

To render his review of state-supported instruction complete, the minister remarks, it is necessary to refer to those institutions which have received subventions from the state as well as those which were founded by and are entirely supported by it.

Private instruction is powerfully aided by the annual appropriations for the different secondary schools (*liceos* and *colegios*), which have been increasing year by year until the sum amounted to \$87,235 in 1907. The mean attendance at these schools for that year was 3,957, which makes the subvention \$22.04 for each student. In like manner the subvention for private primary schools rose in ten years from \$49,490 in 1898 to \$232,286 in 1907. These private schools had an average attendance of 13,898 children of both sexes during the latter year, making \$16.71 for each pupil. Private schools are also assisted

by the State through the gratuitous distribution of text-books and paper. The minister adds that although it is well for the treasury to be open-handed in its assistance to private schools in a country where there is so much illiteracy as there is in Chile, still two considerations must be kept in view—one, that this assistance should not be so prodigal as to impede the development of the public or state schools, which have a much broader plan of studies than the private institutions, and the second, that the Government should not grant this assistance without careful examination, because, while there are schools and societies worthy of all credit, there are others, unfortunately, which do not faithfully perform their duties to the heads of families.

To insure the proper performance of their functions, the Government at the close of 1907 obtained a grant of \$109,500 as a subsidy to be paid to the pupils (at the rate of \$7.30 a year each) of such private schools as would comply with the conditions contained in an ordinance which the Government issued at the same time. Among these conditions were provisions that the hygienic surroundings of the schools must be good; that the teachers must have diplomas from the normal schools, or have bachelors' degrees in the humanities, or pass examinations; that reading, writing, elementary arithmetic, geography, and history of Chile be taught; that the schools should be in operation at least one hundred and fifty days in the year, and that they should be subject to inspection by the regular inspector of the public schools.

A table showing the growth of the state primary schools from 1891 to 1907 shows that in the latter year there were 2,319 such schools, with 3,997 teachers, an enrollment of 197,174, and a mean attendance of 121,176, or 61.4 per cent of the enrollment. The number of teachers in 1907 who were graduates from a normal school was 1,415, against 2,582 who were not "normalists," wherefore the Government determined to stimulate the zeal of those teachers who have not had a normal course by giving them facilities to study in a pedagogical seminary, and to that end issued an ordinance providing for the examination of such teachers at a normal school before an examining board for the purpose of granting diplomas as qualified teachers. The subjects prescribed for examination include methodology and manual training, with the usual subjects of study of primary schools.

Promotions in the public school service, as in all branches of the Government, should be based solely upon merit and not be due to favor. Only those normal teachers, therefore, should be appointed directors of superior schools who are proved to be worthy of the trust by their intelligence and high character and their experience in teaching.

Appointments to these places were, accordingly, made subject to competitive examination by a decree of May 25, 1908, which provides minutely for the conduct of such examinations before an examining board at some one of the state normal schools.

In recent years manual training has developed to a considerable extent in the public schools of Chile, the first 10 carpenter shops having been established in 1899, while in 1907 there were 29 carpenter shops, with 908 pupils working in them; 40 shops for working in pasteboard, with 1,270 pupils; and 51 shops for needlework, with 5,100 girls at work in them.

The Swiss method of instruction has been followed in these schools, with the view of cultivating the natural aptitude of the pupils, but a more practical end will be observed in future and the instruction will be correspondingly modified and the number of shops greatly increased. Especially is this practical object to be kept in view in the superior schools, where the pupils will be taught mechanical trades, so that they can enter into business readily.



In 1908 there were 15 normal schools for the training of teachers in Chile, 6 for men and 9 for women, and a new normal school for women was established that year in the Province of Malleco.

The following table gives the statistics of normal schools for 1907:

NORMAL SCHOOLS IN CHILE.

	For men.	For women.	Total.
Number of schools.....	6	9	15
Number of teachers.....	111	182	293
Enrollment.....	722	1,255	1,977
Average attendance.....	580	1,029	1,609
Number of graduates.....	66	54	120

PRACTICE SCHOOLS.

Enrollment.....	583	815	1,398
Average attendance.....	479	631	1,110

The Government is so sensible of the importance of the normal schools that a special decree was published under date of April 27, 1908, with reference to the appointment of teachers, in accordance wherewith "normalists" (i. e., graduates of a normal school) who have completed the course of the Pedagogical Institute and those who have studied at the Institute of Physical and Manual Training are to be preferred as teachers in normal schools, and if such candidates are not available, then those who have diplomas as teachers in normal schools or university graduates will be accepted, thus precluding the possibility of filling the positions with unqualified persons.

The plan of studies of these schools has also been modified, more reliance being placed upon the study of text-books and works of reference than heretofore when the students were accustomed to make notes of the lectures of the professors. The list of works includes the names of several French and German authors (Compayré, Schuffe, Schutzer).

Commercial education in Chile, so far as it has developed, is a growth of recent years. A list of nine commercial institutes in as many cities is given, with an average attendance of 934 students in 1907. By a decree of May 26, 1908, the following industrial course of study was prescribed for the technical commercial institute of Iquique, which prepares its students to be employees of the Government and analysts and technical experts for the saltpeter industry: English, German (elective), wood and iron working, industrial chemistry, machines and motors, electricity, and drawing—the last four subjects being studied practically in the laboratory and shops.

*Secondary education.*—The law of January 9, 1879, provides that there shall be at least one establishment of secondary instruction in each province; that is to say, that there should be one liceo for young men in each of the twenty-three provincial capitals. Many other liceos have since been created in different cities, until in 1907 there were 39 in the whole country, with an enrollment of 9,302 and an average attendance of 7,896; there are, besides, 31 liceos for young women, supported by the State, with an enrollment of 4,810 and an average attendance of 3,839. The courses of study in these liceos are designated in the tables as "preparatory" and the "humanities," the latter being the usual secondary course, to which the new studies of civics, psychology, philosophy of the sciences, and general history of civilization were to be added. The average attendance on the course of the humanities was 4,555 young men and 1,779 young women in 1908.



The preparatory course in the liceos for girls is of three years, and in some cases the first-year course appears to be designed for very young pupils.

*Superior instruction.*—Higher education in Chile is placed by law under the direction of the council of public instruction, while the University of Chile in its various establishments is the actual seat of this branch of instruction. As stated by the minister in his report, the university has not only been the fountain of instruction and learning as such, but has been the source of the progressive ideas in educational reform which have so rapidly modified the intellectual condition of the people in recent years.

The council of public instruction was for forty years, under the name of the council of the university, the principal auxiliary of the Government in all educational matters, whether relating to primary, secondary, or superior instruction. It was, however, deprived of its jurisdiction over primary instruction by the law of 1879, while its authority over the other two branches was made supreme, and during these thirty years it has accomplished a notable work. It is charged with the duty of conferring degrees and titles which qualify the students to practice professions or enter the public service, and has provided a series of examinations as a condition precedent to granting the degrees. This has been the powerful lever by means of which the council has fomented so efficaciously the intellectual development of the country. The degree of bachelor of the humanities is evidence that the student possesses all the ideas which are indispensable to a man of cultivation and a good citizen. The degree of licentiate in law or medicine or mathematics (engineering) is clear proof not only that its possessor is qualified to practice the corresponding profession, but it also implies that he knows, and knows well, other subjects of study which, although they may not be necessary in the practice of his profession, yet give him greater breadth of view and stability of principle. The council has in this way been of great service to the country directly and indirectly, and it has also contributed to the general education of the people through its own publications, such as the *Anales de la Universidad*, and by publishing other important works and granting premiums.

The faculty of law is composed of the leading judges and advocates of the Chilean bar. In 1907 the number of law students was 476. The minister of foreign relations has proposed that a course should be established in the law school for the training of young men for the diplomatic and consular service.

The medical faculty, like that of the law, is composed of the most distinguished practitioners in Santiago, and the students numbered 232 in 1907. The school of pharmacy connected with the medical faculty had an enrollment of 54 in that year, the school of dentistry 80, and the school of matrons 37.

The mathematical course of the university is on a par with those of law and medicine. Its teaching force is composed of Chilean engineers of high standing, together with some foreigners.

On September 19, 1907, the Government, upon the recommendation of the council of public instruction, created a special class for the study of the exploitation of saltpeter and analogous salts, the great importance of the saltpeter industry to Chile making that step advisable. The professor will be required to make reports to the Government upon the manufacture of fertilizers in foreign countries.

Another new chair in the mathematical course is that of seismology and seismic architecture, suggested particularly by the earthquake of 1906. The services of Prof. Montessus de Ballore were secured to fill this chair and to erect and superintend a seismological observatory.

In 1907 there were 250 students in the mathematical faculty.

There are an astronomical observatory, the museums of natural history of Santiago, Valparaiso, and Concepción, and a botanical garden, connected more or less directly with the faculty of physical sciences and mathematics.

Much space is given in the report of the minister of the pedagogical institute, which may be regarded as the teachers' section of the faculty of philosophy and humanities. This institute was created twenty years ago, and has ever since been acquiring the development and influence its founders hoped for. Its students were at first internes, but this system was soon abolished and now only externes are admitted. It has graduated 310 teachers of both sexes, and the matriculation for 1907 showed 205 names. The principal recent improvement has been the installation of cabinets and laboratories of physics, chemistry, and the biological sciences, while the plan of studies was considerably modified in the latter part of 1907. There are now seven courses, viz: (1) Spanish, (2) French, (3) English, (4) German, (5) history and geography, (6) mathematics and physics, (7) biological sciences, chemistry, and mineralogy. All students of the institute are required to study (1) theoretical and practical pedagogy, (2) experimental psychology, (3) logic, ethics, and the history of philosophical systems, and (4) civics and elements of school legislation. A list of the studies prescribed for one of the courses, that in Spanish, will give an idea of those in the four others in languages, as they are practically identical, excepting the language which gives the name of the course.

Course in Spanish: Style and composition, Spanish linguistics, Latin, some foreign language (French, German, or English), theoretical pedagogy, psychology, logic and ethics, history of philosophical systems, civics.

An idea of the scope of the instruction in the foregoing may be obtained from one subject, viz, Spanish literature. This is divided into three heads: (1) Latin, anteclassical and classical literature of Spain. (2) Contemporary literature. (3) History of Spanish-American literature, colonial and post-revolutionary.

The other subjects are similarly treated, and examination topics corresponding to and fully covering each general subject are given.

Under chemistry and mineralogy are included the theoretical and experimental study of general chemistry; inorganic chemistry, with qualitative and quantitative mineral analysis, including volumetric analysis; organic chemistry, theoretical and descriptive, preparation of organic compounds, including synthesis, elementary organic analysis and determination of formulas, application of analysis to foods, drinks, and industrial products; crystallography, geometrical and physical, with goniometry, general and descriptive mineralogy, the principal mineral species, determination of minerals and blow-pipe assay; petrography, the most important rocks and their origin, preparation of thin sections, and determination by means of the microscope.

The foregoing shows a very comprehensive course in chemistry and mineralogy, including petrography, sufficient, it would seem, to give a student ample knowledge not only to teach the subject intelligently, but also to enable him to pursue the study by himself.

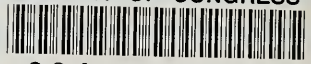
Systematic pedagogy includes, (A) theoretical part. Under this come, (1) the study of the pupil: (a) the fundamental laws of psychological life, psychology, and paidology; (b) the ideal forms of psychical life, ethics, logic. (2) The study of the educator, which includes (a) general methodology of education, especially secondary; (b) special didactics of the different subjects taught in secondary schools. (B) The practical part: (1) Psychological investigations in the laboratory; (2) attendance at the practice school, practice recitations and criticism.

The Spanish-American countries, following the Latin traditions, maintain schools of art and music as public institutions supported by the State. The studies of the schools of fine arts in Chile include painting, drawing, sculpture, engraving, and architecture, and the teachers are often European artists who have received prizes for their work in Paris or Spain. There were 243 pupils of both sexes at the two schools of fine and decorative art in 1907, and 144 male and 439 female students at the national conservatory of music. This institution is of great benefit to the middle class of the population, since the greater part of its graduates become teachers of the piano and singing, and are trained to become actors and actresses.





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