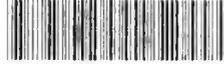


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Statistical Study of the Progress of the Philippine Public Schools, 1910-1921.

by

Fernando Solidum Fuentes

A.B. 1921

LA 355.1 *Philippine Islands.*

THESIS

Submitted in partial satisfaction of the requirements for the degree of

MASTER OF ARTS

in

F. W. HART

Education

in the

GRADUATE DIVISION

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## INTRODUCTION

My contact with the public schools of this country, and my knowledge of similar institutions in the other countries, has suggested to me various educational problems. This knowledge has kindled a desire to find out in what degree these problems have affected the Philippine public school system and to what extent that system has solved those problems. Heretofore we have heard a great many generalizations about the wonderful progress of the Philippine public schools. We are, however, living in an age when such mere generalizations would no longer hold unless authenticated by the actual facts. Furthermore, mere generalization will not be of any use to the men and women whose desire is to solve these various problems for the betterment and efficiency of the system. We must have adequate information and facts at our command before we can expect to solve our problem.

It is partly for this reason that I go into a more detailed discussion in chapter II of this thesis on the present Philippine public school system. I realize that I do not have something original to offer in this work. If I could find out, however, just where both the strength and the weak-

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AND JOHN D. ROCKEFELLER, TRUSTEE

IN TESTAMENTARY TRUSTS

FOR THE BENEFIT OF THE CHARITABLE FOUNDATIONS

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ness of the Philippine public school system lie, my work has accomplished something which is both useful to me and to my fellow students who are interested in the field of education.

For those who are not acquainted with the past system of education in the Philippines, I have briefly described in chapter I the type of public schools which the American army officers found in the Philippines in 1898, and the degree of education of the Filipino. With this as a starting point, I discuss in chapter II the efficiency of the present school system in terms of its organization and administration, of its financial support and of the service which it has rendered to the people as a whole.

I found that there is a considerable degree of progress but there are also some weaknesses which should be strengthened before a certain maximum of efficiency can be expected from the public school system. To the student, however, who is not acquainted with the general condition of the country, such indication of progress would not mean anything unless some means of comparison could be provided. To solve this, in chapter III, I prepared an index for the Philippine public schools, for a period of ten years. This index is based on Ayres' Index Number for the State school system. With both the index number for the school system of the State school system, of Porto Rico and the Philippines for the same year, an adequate comparison of the effort which these countries put

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behind their respective school systems, is made possible.

The question of course is in the authenticity of the various data that are here used and for this I can only say that considerable time has been spent in computing and in checking the results obtained. The data that are used with the exception of the population of school age and some other important facts that are required for the purpose of comparison, are all taken from the reports of the Philippine Bureau of Education which cover the same years. It should be understood, however, that for convenience the school years 1911-1912, 1912-1913, and so on, are indicated in the work as only 1911, 1912, etc.

In closing, I wish to acknowledge the invaluable suggestions of Dr. F.W. Hart in the planning of the work.

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## CHAPTER I

### The Philippine Public School System during the Spanish Regime

Although the Filipinos had been under the Spanish rule for 300 years and enjoy the distinction of having the oldest<sup>1</sup>

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1. Facts and Figures about the Philippines pp. 16-21  
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university under the American flag, yet when the United States government took the Philippines from Spain in 1898, it was found that a great mass of the Filipino people did not have the privilege of possessing even the simplest elementary education. It is for this reason, interesting to note that after a comparatively short period of only 22 years of American tutelage of this archipelago, illiteracy is almost wiped out and to-day every Filipino takes great pride in calling the attention of his friends to the fact that seventy per cent of their people above ten years of age, as over and against 38.59<sup>2</sup> per cent of the population of Spain, can read and write.

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2. Statesman's Year Book for 1918, p. 1273  
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A further enquiry into the facts concerning the system of education in the Philippines during this three centuries of Spanish rule will reveal the reason for this wonderful

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progress of the Filipinos in the line of education.

The first Spanish expedition for exploration was sent to the Philippines in 1521, but the Spanish government paid no attention to the education of the natives until about 1863. Whatever schools were established during this early period of the Spanish occupation, were due to the effort of the various religious orders. As a result, secondary schools were open only to the very small class of children whose parents could afford to bear the burden of educating them.<sup>3</sup> Primary

3. Report of the Philippine Commission, 1903. Part III, p. 670 et. seq.

instruction was also given in these schools but for the most part it consisted only of the learning of the rudiments of religious instruction. Moreover, nearly all of these schools were located in Manila, and considering the great difficulty of transportation during this time, the attendance of the children from the other parts of the archipelago was entirely out of the question. In some towns the priests opened and maintained schools for the children in the town that they might learn morals and religion. Reading and writing, sacred history, and in some cases, the teaching of simple arithmetic, constituted the whole curriculum. The teachers were generally all Filipinos who were just as ignorant as their pupils about the subject matter. As most of the primary and secondary instruction was confined to the schools of Manila, the children



in the towns, after completing their simple training in these convent schools, did not have further opportunity for higher education. The "graduates" either served as "sacristans" in the church, or as clerks, or as teachers in their "home schools".<sup>4</sup>

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4. In the Philippines the woman in the house or the old men held reading schools in their homes for the boys and girls. These schools can still be found in some parts of the islands.

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It is obvious that this system of schools was entirely inadequate even to meet the rudimentary needs for instructing catechism. The number of the schools was so few that only a very small percentage of the children had the opportunity of attending. Moreover, the Spanish people were very careful not to let the natives learn their language, and to make this effective, they took a great deal of pain in translating the religious primer into whatever dialect the people of the community spoke. As a result, the masses of the Filipino people could not speak and read intelligently in Spanish, and the various diversified native dialects were greatly and sharply magnified.

Spain realized her folly in neglecting the education of the natives. She realized that the success of her colonial policy depended upon the intelligent cooperation of the people in her colonies. In 1863<sup>5</sup> by a Royal decree, a system of pri-

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5. Report of the Philippine Commission, 1903. Part IV, pp. 627-635



mary public education was ordered established throughout the entire Philippine Archipelago. It provided for every 5000 people one male and one female teacher, or one school for boys and one school for girls for every 5000 inhabitants.

This good intention, but utterly inadequate provision for an effective educational system, was never realized, and the type of education that the Filipinos received was only just as good or even worse than before. In 1898 the facts show that the population of the Philippines was 6,709,810, and there were only 1914 teachers, -991 males and 923 females. According to the law the number of teachers for this population should be 1942 teachers for each sex.

The entire school system was organized into three divisions under the Department of Public Instruction. The first division, the Superior or Secondary schools, was placed under the charge of the authorities of the University of Santo Thomas; the second division, the Elementary or the preparatory schools, was placed under the supervision of the Normal schools; and the third division, or the Primary schools, was in charge of the school masters and mistresses of the towns. Theoretically, the entire school system was under the control of the King of Spain through the Governor General of the islands who had a general supervision over all the schools. In actual practice, however, the ecclesiastical department of the insular government had the entire control of the school system. In the secondary schools the various religious orders



remained supreme in the management of their schools, and the "curas" or parish priests remained the supreme head of the town schools.

With the exception of the primary schools that were established according to the Royal decree of 1863, and the normal schools in Manila, all the secondary schools were maintained by the various religious orders, by fees and tuition, and sometimes by the aid of the government of Spain. In most cases these schools had a very high tuition, and consequently only very few of the children were able to avail themselves of the benefit from them.

The curricula<sup>6</sup> of the secondary schools included the

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6. Senate Document 129 56th Congress, 2nd session Vol. 11,  
p. 29  
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following courses:

- Spanish and Latin grammar.
- Elements of rhetoric and poetry.
- Elements of physical geography.
- Elements of descriptive Spanish geography.
- Universal history.
- Arithmetic and algebra.
- Geometry and plane trigonometry.
- Elements of physics, chemistry, natural history, psychology, logic, moral philosophy, general outline of anatomy, and hygiene.

Some of these courses were also given in the higher schools or colleges. In addition to such preparatory courses in science and philosophy, professional courses were given, such as courses in medicine, pharmacy, theology, jurisprudence, canonical law, physics, and chemistry.

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In the primary schools instruction was given in the following courses:

- Christian doctrines and principles of morality and sacred history.
- Reading and writing.
- Practical instruction in Spanish.
- Elementary arithmetic, comprising the four rules for figure, common fraction, decimal fraction, and instruction in the metric system with its equivalents in the ordinary weights and measures.
- Practical agriculture.
- Rules of deportment.
- Vocal music.

With these purely academic and professional schools, there were also other technical schools which gave technical training in some lines of vocation. Notably among these were the School of Arts and Trades, the School of Agriculture, the Nautical School, the School of Painting and Sculpture, and the Theological Seminaries.

From this array of courses and various types of schools it would appear to an uninformed reader that the Filipinos had had a fair chance for education under the latter part of the Spanish rule. In theory the assumption would appear to be true but there are various factors that may be considered as fair indexes of school efficiency.

The ability of the teaching staff to carry the work entrusted to them is one of these indexes. According to the Spanish school law<sup>7</sup> only the graduates of the normal schools

7. Senate Document 129 56th Congress, 2nd session Vol. 11, pp. 30-31

would be permitted to teach in the elementary schools. But

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such rule was never followed. The graduates of the normal schools never followed their profession as teachers. The salaries offered were so low<sup>8</sup> that they prepared for employment

8. Teachers were classified according to the importance of the towns in which they served. The following is the table of salaries they received: per month:

	Men	Women
Highest grade, first class	\$20.00	\$12.50
Highest grade, second class	15.00	10.00
Intermediate grade	12.50	7.50
Lowest	10.00	6.00
Assistants	7.50	5.00

in the other lines of work. Consequently, most of the 1914 teachers who were found teaching schools in 1898 were very poorly trained and could hardly speak the Spanish language or read intelligently the Spanish texts.

The next thing that might serve as a fair index for an efficient school system is the types of buildings and school equipment. The Spanish schools were all short of these.<sup>9</sup> In

9. Report of the Taft Commission Vol. 1, p. 5

many cases there were no school houses, no text books, and no furniture. The schools were held in the residences of the teachers or in the buildings rented by the municipalities and used by the teachers as dwellings. Wooden benches and tables were sometimes the only furniture that could be found in these buildings.

The law<sup>10</sup> provided for a compulsory attendance of the



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10. The law attached a fine of from 2 to 3 "reales" or the equivalent of 5 and 10 cents for every child who was caught not attending any school.  
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children between the age of seven and twelve except when these children were given equivalent training in their homes or in the private schools, or when they were living in places that made it impossible for them to go to the nearest school. As most of these schools were in the center of the towns, most of the children outside the town were entirely neglected. Moreover, the term of the school was very irregular, and sometimes the teacher who would like to take a vacation or to visit some other friends in the other towns, would suddenly close his school until he returned.

This was the general condition of the educational system which the American found in the Philippines in 1898, and with the knowledge of the situation, he inaugurated the present system.



## CHAPTER II

### The Present Educational System in the Philippines

#### Part I

#### The Early Beginning

In the previous chapter I have briefly described the inadequacy of the school system in the Philippines from the very beginning of the Spanish rule over these islands up to 1898 when the United States government took over the city of Manila.

The American army authorities quickly realized the difficulty of the situation that was confronting them. They knew that the great mass of the people were ignorant, and the only way to solve the problem was by giving the natives a good system of public education that would give them every opportunity to show what they could do.<sup>1</sup> Pursuing this noble pol-

1. Senate Documents, 56th Congress, 2nd session. Vol. 11, p. 37

icy, the schools in Manila were immediately reopened scarcely after three weeks of their occupation of the city, and placed under the charge of Army Chaplain W.D. McKinnon.<sup>2</sup> McKinnon

2. Ibid. p. 39; also Bureau of Education Bull. No. 41, p. 17

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I. Separate documents...

p. 27

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S. Ibid. p. 29; the...

held this office until June 1, 1899 when Lieutenant George P. Anderson was appointed as superintendent of schools with an enrollment of 4500 pupils in the city of Manila. Having temporarily in charge the schools in Manila, General Otis and the rest of the army officers conceived a plan of extending the educational facilities throughout the entire archipelago, and so in March 30, 1900<sup>3</sup> the military government formally

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 3. Brown, Arthur J. "New Era in the Philippines" pp. 241-255; also Bureau of Education Bull. No. 41, pp. 17-28  
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constituted the Department of Public Instruction for the island, and placed Captain Albert Todd at the head of the department. Acting upon this new responsibility, he secured the opinions of the other army officers as to the general policy which the department should follow. As a result the following points were suggested:

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 4. Supra, Note 1, p. 42  
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- 1) "That a comprehensive modern school system for teaching elementary English be inaugurated at the earliest possible moment and attendance be made compulsory wherever practicable.
- 2) "That industrial schools for manual training be established as soon as a fair knowledge of English had been acquired.
- 3) "That all schools be conducted in the English language as far as in any way practicable, and the use of Spanish or the dialects be only for a period of transition.

held this office until 1912, when he was

P. Anderson was appointed as a member of the

of the Board of Education in 1913, and

thereafter he became the school superintendent

the year of the same officer's appointment

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and to in 1915, when he was appointed

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districts be only for the purpose of

- 4) "That English teachers well trained in primary instruction be brought over from the United States in sufficient number to take charge of the schools in larger towns.
- 5) "That a well equipped normal school be established for instructing the natives to become teachers of English.
- 6) "That in large towns at least the school houses be modern structures, plainly, but well and properly equipped.
- 7) "That the schools supported by the government be absolutely divorced from the church. If the natives desire schools in which religious instruction is to be given, that they furnish the entire support of same from private sources."

When the first Commission was formed in 1900, Dr. Fred W. Atkinson was made the first general superintendent and in 1901 the Taft Commission enacted a school law<sup>5</sup> which in addition to defining the principles and regulations of the public schools, outlined also the duties and powers of the general superintendent .

5. Brown, A.J. "New Era in the Philippines" pp. 245-246

Following the policy of employing teachers from the United States in the Philippine service, the general superintendent through the Commission authorized certain institutions in the United States to select and send teachers to the Philippines. As a general rule, however, the practice was to appoint the individual who was either a normal or college graduate, or who had attained an equivalent education, or who had

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at least two years of successful experience in school work,  
or who had satisfactorily passed the examination.<sup>6</sup>

6. Manual of Information, Philippine Service pp. 20-25  
(1904)

In 1901, 765 American teachers were brought to the  
Philippines, but due to the prevalence of cholera epidemics  
in 1902 and various other discouraging features which the  
stranger may always find in the foreign land, some of them  
were disappointed. A great many, however, did some wonderful  
and heroic work particularly during the epidemic.<sup>7</sup>

7. Bureau of Education Bull. No. 41, pp. 18-19 (1911)

On January 1, 1903, Dr. Elmer B. Bryan succeeded Dr.  
Atkinson, but he was taken ill, and Dr. David P. Barrows, who  
was then the superintendent of schools in the city of Manila,  
took his place. Barrows developed a plan<sup>8</sup> to suit the chang-

8. Ibid. p. 19

ing conditions. The American teachers in primary schools were  
made supervisors as the Filipino teachers became better qual-  
ified for the class room work. Courses of study were revised,  
the distinction between the primary and the intermediate  
grades was clearly defined, industrial work for all grades  
was prescribed, and a uniform system of examination and pro-  
motion was inaugurated. Dr. Barrows held the office of Dir-

at least two points of view. It is not clear from the report whether the author is referring to the physical location of the classroom or to the psychological distance between the teacher and the students. The latter interpretation seems more likely, given the context of the study.

In the first instance, the physical layout of the classroom was examined. The researcher noted that the desks were arranged in a traditional rectangular pattern, which may have contributed to the sense of distance. However, the researcher also noted that the teacher's position at the front of the room was a significant factor in the perceived distance.

The second point of view concerns the psychological distance. The researcher hypothesized that the teacher's behavior and the students' responses would influence their perception of distance.

On January 1, 1971, the researcher conducted a series of observations in a classroom. The researcher noted that the teacher's physical distance from the students was approximately 10 feet. However, the researcher also noted that the teacher's behavior, such as the use of a lecturing style, contributed to a sense of psychological distance.

8. Table 1. p. 12

The researcher also noted that the students' responses to the teacher's behavior were consistent with the hypothesis. The students showed a clear preference for a more interactive teaching style, which would reduce the perceived distance. The researcher concluded that the physical layout of the classroom and the teacher's behavior both contribute to the perceived distance between the teacher and the students.

ector of Education until November 1909, and during his splendid administration, the entire school system experienced a great deal of prosperity. It was during this time that the present school system in the Philippines received a much firmer foundation and a broad and well defined policy which is now playing and will continue to play a decisive role in the formation of the Filipino nation. Since his resignation to the present time, four different men have headed the Bureau of Education and each of their administrations, as we shall note later, was marked with more or less success.

## PART II

### Types of Schools Established

Following the policy of preparing the Filipinos for self government,<sup>9</sup> the first Philippine commission early recom-

9. Elliot, Charles B. "The Philippines to the End of the Military Regime" p. 59

mended the establishment of the elementary schools throughout the islands, and as soon as the conditions did permit, secondary schools as well as various industrial and technical schools were also established.<sup>10</sup> The recommendations were fol-

10. Taft Commission Vol. 1, p. 38



lowed very closely, and to stimulate the municipalities in their school building program, the Insular government contributed annually to their school building fund. In 1920 there were 5,944 schools throughout the Philippines. Out of this number there were 5,280 primary schools, 614 intermediate schools, and 50 secondary schools. The graphic representation upon the following page shows the growth of the schools. The actual number of schools for each grade is shown in Table II on page 23.

The graph shows that there was a great decrease in the number of schools in 1913. This was due to the corresponding increase in the number of the standard buildings which were completed and only used this year. This standard building was able to house more pupils than the old rented houses which were used for school purposes. Some of these rented houses and some of the old school buildings were abandoned. During this time there were 2,480 school buildings and out of this number 624 were permanent buildings.<sup>11</sup> Another reason for this de-

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 11. Bureau of Education, Report, 1919. Graphic p. 77.  
 -----

crease was the corresponding decrease in the school enrollment, which was partly due also to the children's strike<sup>12</sup>

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 12. Bureau of Education, Report, 1913, p. 12.  
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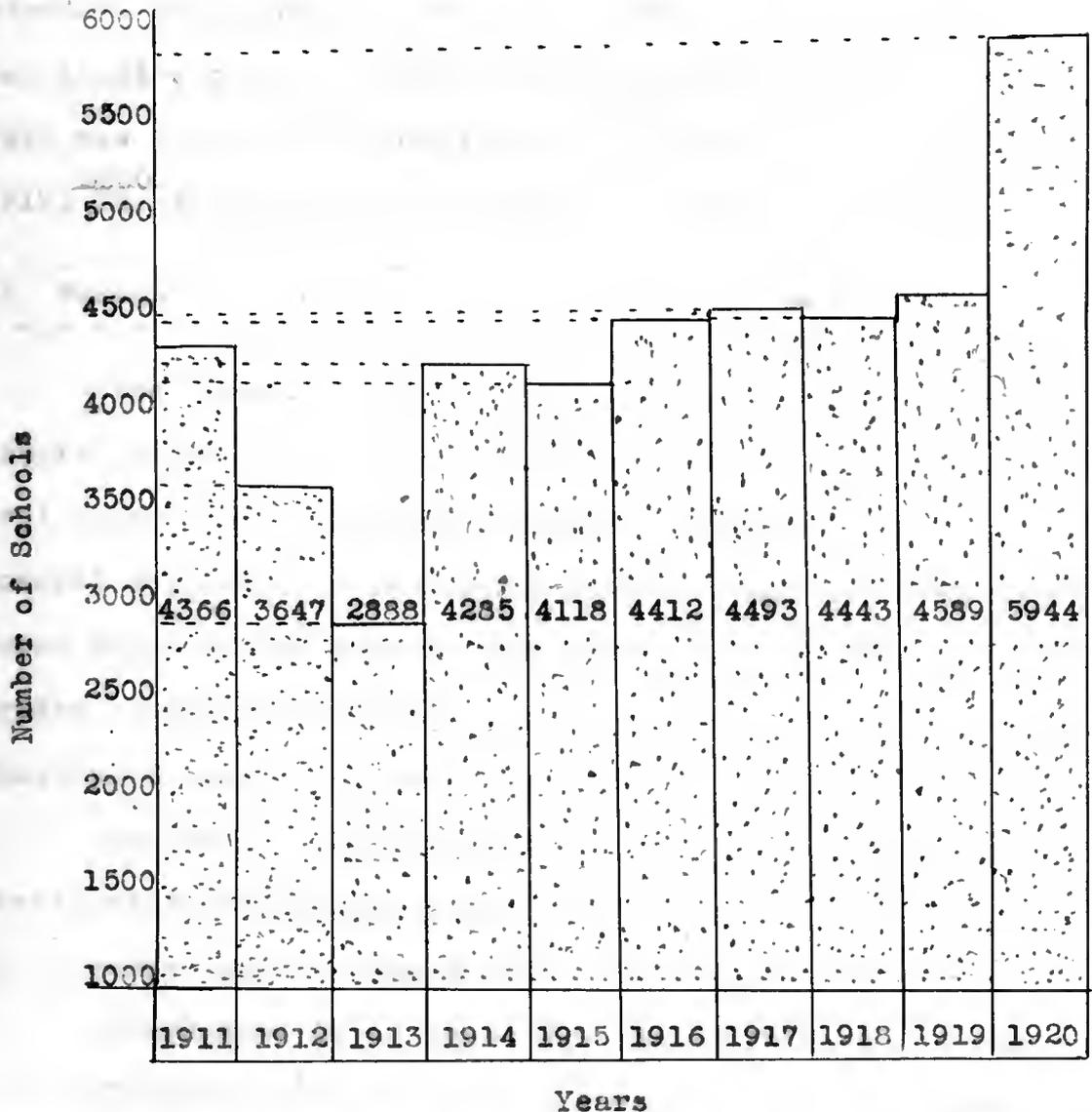
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## GRAPH I

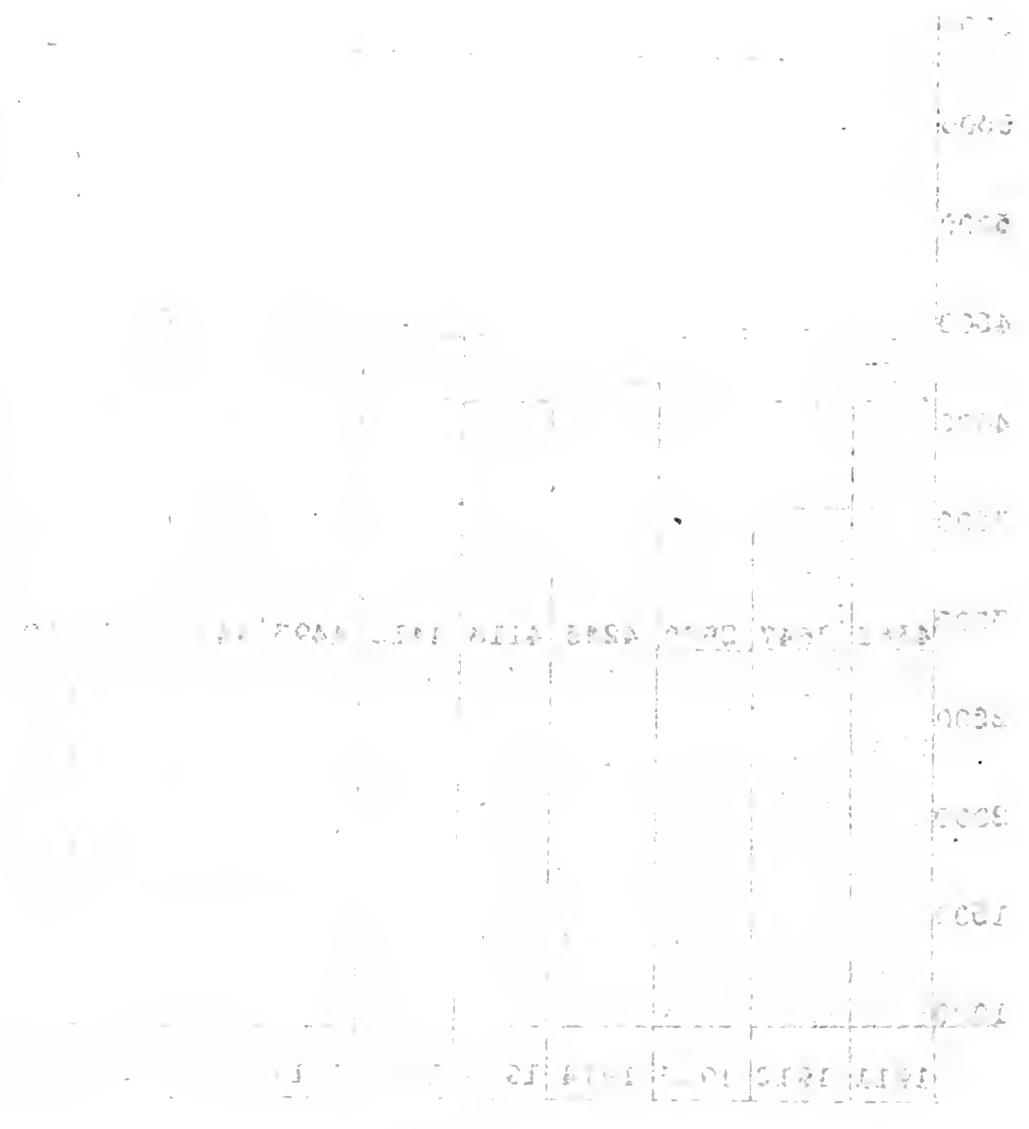
Data Taken from Reports of Bureau of Education  
for the Same Years as Shown in Table II, p. 23.



when the number of schools was 4,404, was 610,493, while in 1913 the total enrollment was only 440,050.<sup>13</sup>

13. Bureau of Education, Reports for (1910-11) and (1912-13)  
Appendix No. 4

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The apparent increase in the number of schools in the school year 1920 is also due to the increased number of children enrolled during the school year and the number of the standard buildings that was completed. The total number of permanent school buildings that was used during the school year was 1,046 or an increase of 127 school buildings from 1919. The total annual enrollment was 691,622 pupils.<sup>14</sup>

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 14. Bureau of Education Report of 1920, Appendix B  
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The Bureau also has charge of six insular schools of special types and some experimental schools such as settlement schools and farm schools. These six insular schools of special type are the Philippine Normal School, the Central Luzon Agricultural School, the Philippine School of Arts and Trades, and the Philippine School of Commerce, the Philippine Nautical School, and the School for the Deaf and the Blind.

In table I the apparent increase in the growth and activity of these special elementary schools is clearly shown for a period of five years from 1915 to 1920 inclusive.

There were 59 of these schools in 1915, occupying 1,350.33 hectares<sup>15</sup> of land and producing an annual product of

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 15. Report of Bureau of Education of 1915, pp. 104-106; and 1920, pp. 136-140  
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the value of 31,746.68 pesos or \$15,873.34. The total annual enrollment was 5,553 children. In 1920, however, the total

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number of these schools reached 251, and the total area of land cultivated was 126,938.95 hectares. The total enrollment was 22,384 children, and the value of the annual product for the same year was 341,535.42 pesos or \$170,767.71.

The significance of this increase can only mean one thing--progress. Specifically, it means that the school system is offering opportunities for the children in the more sparsely populated communities as well as to the non-Christian children in the mountain districts. By supporting these schools with the fund from the Insular government, the establishment of these schools which can reach and serve the needs of the children in the remote regions of the country, is made possible.

With these special elementary schools, the Bureau also maintains schools in the different parts of the island where the local industries can be developed. These schools are known as the "Schools of the Household Industries". There is still one more system of schools which the Insular government partly supports. These are known as the "Subscription Schools." The name is derived from the fact that they are mostly maintained by free voluntary contribution from some private individuals and communities.

With these facts, and if the efficiency of the educational system can be measured in terms of service, one may safely infer that through these various schools the Philip-



TABLE I<sup>1</sup>

**Agricultural, Farm, and Settlement Farm Schools  
Showing Types of Special Schools**

**A. Agricultural Schools**

Year	No. of Schools	No. of Teachers	Annual Enrollment	Area in Hectares	Annual Value in Pesos
1915	4	19	539	923.75	10,953.68
1916	6	31	837	1018.76	10,892.56
1917	9	45	1086	1296.00	18,669.76
1918	9	51	1473	1541.00	31,199.23
1919	13	73	2243	3880.00	79,421.54
1920	15	81	2286	4446.00	119,482.95

**B. Farm Schools**

1915	8	39	1372	90.75	8,039.11
1916	10	48	1732	94.45	7,384.93
1917	11	61	2035	121.90	12,854.43
1918	12	69	2363	168.00	26,591.99
1919	14	80	2405	207.00	30,066.43
1920	14	78	2207	285.00	56,886.42

**C. Settlement Schools**

1915	47	71	3642	335.83	12,761.89
1916	63	97	4856	513.18	17,697.45
1917	104	165	8339	1090.50	20,726.95
1918	117	202	9302	1297.00	47,669.95
1919	162	308	13307	2316.00	91,856.32
1920	222	420	17891	7171.00	165,166.05

1. See page 17.

Table 1. Summary of the data for the different groups.

Group	Number of subjects	Mean age (years)	SD (years)	Range (years)
Group 1	10	25.5	2.5	20-30
Group 2	10	26.0	2.8	21-31
Group 3	10	26.5	3.0	22-32
Group 4	10	27.0	3.2	23-33
Group 5	10	27.5	3.5	24-34

Table 2. Summary of the data for the different groups.

Group	Number of subjects	Mean age (years)	SD (years)	Range (years)
Group 1	10	25.5	2.5	20-30
Group 2	10	26.0	2.8	21-31
Group 3	10	26.5	3.0	22-32
Group 4	10	27.0	3.2	23-33
Group 5	10	27.5	3.5	24-34

Table 3. Summary of the data for the different groups.

Group	Number of subjects	Mean age (years)	SD (years)	Range (years)
Group 1	10	25.5	2.5	20-30
Group 2	10	26.0	2.8	21-31
Group 3	10	26.5	3.0	22-32
Group 4	10	27.0	3.2	23-33
Group 5	10	27.5	3.5	24-34

pine public schools are trying to reach every child and to serve the community in meeting its needs.

PART III

The Administration and Supervision

The public school system in the Philippines, like the county system in the United States, is centrally controlled. As I have previously stated, the Department of Public Instruction was created and placed in charge of the general superintendent of schools during the early part of the American administration in the Philippines. Since that time the department has undergone some changes. Instead of having the general superintendent take charge of the whole department, it was placed under a secretary, and the Bureau of Education was created. The Director of Education takes charge of the entire Bureau with the help of the two assistant directors and of the five divisions which take charge of the general office work.

The following chart and diagram will show the Director in his relation to the rest of the various school officers.

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16. Bureau of Education Report of 1915, pp. 10-13  
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	Chief clerk	
	Accounting division	
	Property division	
	Academic division	
	Industrial division	
Directors	General office--	Buildings division
		Records division
		Traveling inspectors
		and instructors
		--Assistants
	Superintendents of	Heads of depart-
	Insular schools	ments-----
		--Instructors
		Assistant supervising
		teachers
	Principals of central	
	and barrio schools	
	and intermediate	
	schools not direct-	
Division Super-	ly under division	
intendents---	superintendents	
	Principals of high and trade schools	
	and intermediate schools not un-	
	der supervising teachers	
	Instruct-	
	ors	

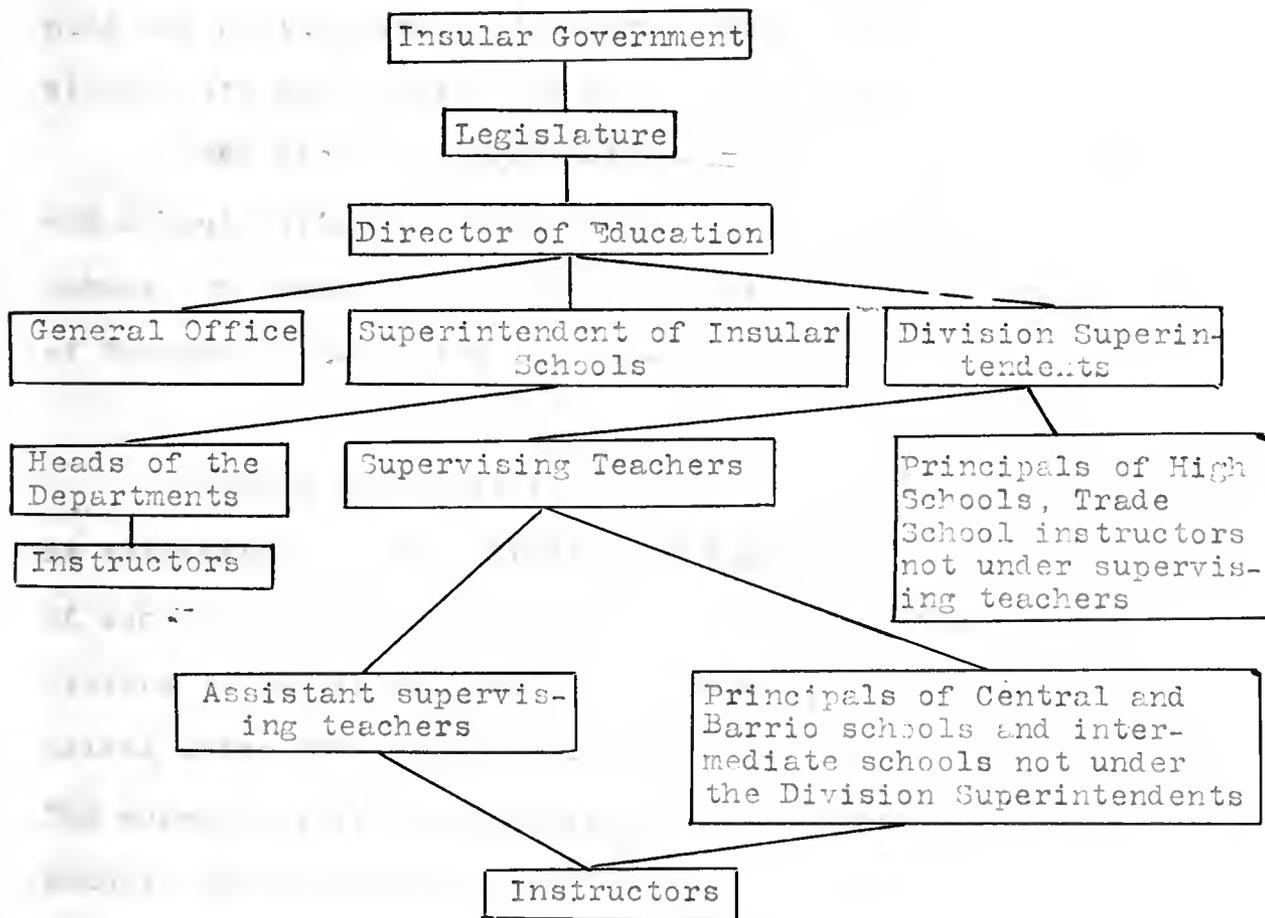
According to the law which was created by the Taft Commission in 1901<sup>17</sup> the Director of Education is given the power:

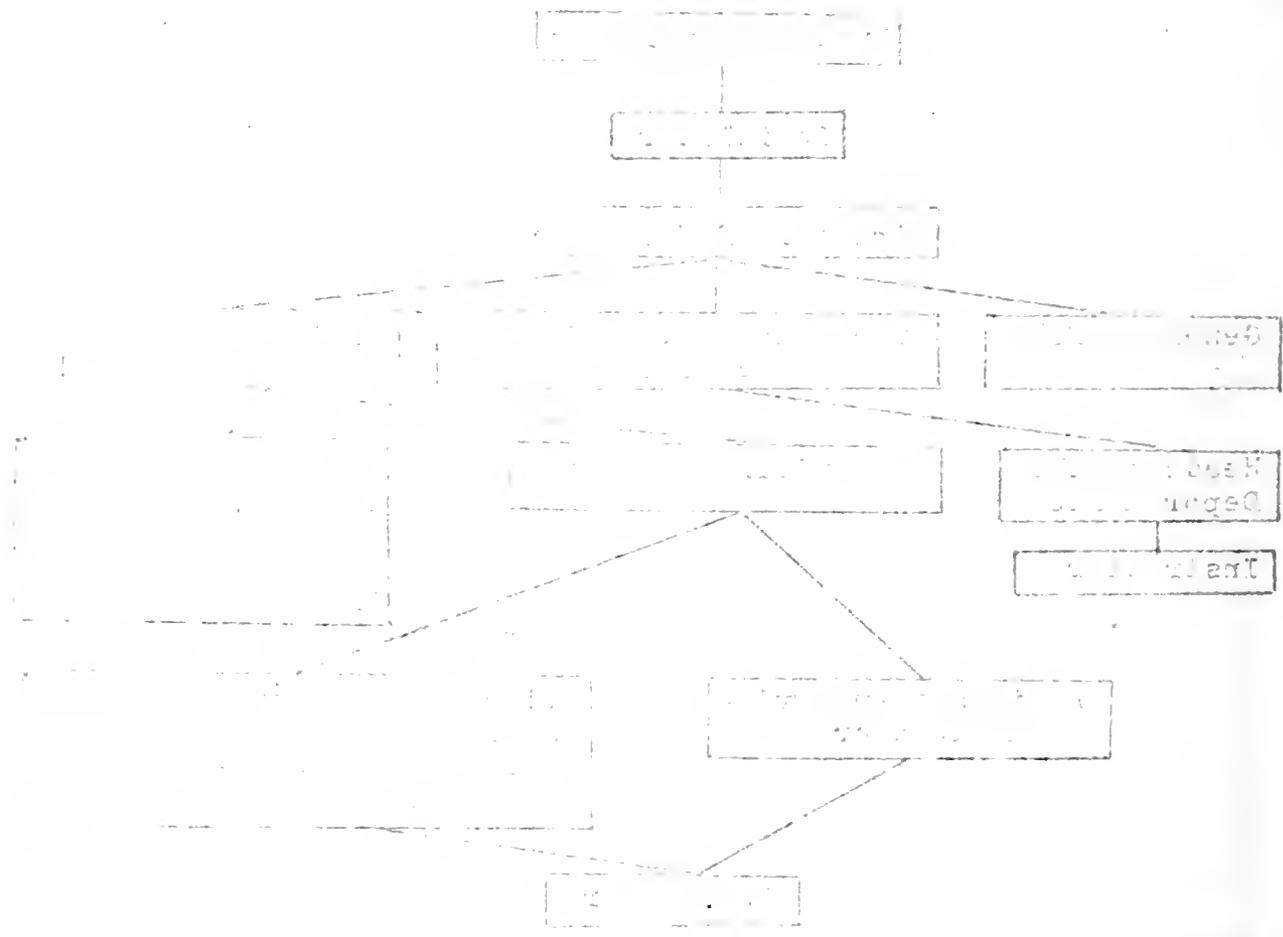
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 17. U.S. Philippine Commission Report of 1900-01, Vol. 2, p. 133 et. seq.; also Brown, Arthur "New Era in the Philippines" pp. 245-246  
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- 1) To determine the qualifications of, and to appoint all subordinate superintendents, teachers, and clerks.
- 2) To prescribe their duties, and up to a certain limit their salaries.
- 3) To fix the curriculum for all grades.
- 4) To determine in what town the secondary schools shall be established.
- 5) To prescribe the plans for the construction of the school



Graphic Representation of the Organization of the Philippine Public School System.





houses to be built by the municipalities.

6) To make all contracts for school supplies.

7) To determine the towns in which English teachers, to be paid out of the Insular treasury, shall teach.

8) To visit and inspect the school divisions.

"The field of organization is now composed of forty-one school divisions which include the Philippine Normal School, the Philippine School of Arts and Trades, the School of Household Industries, and the Department of

"Each division is in charge of a superintendent who is responsible to the Director of Education for the conduct of school work in his division. .... Each of the field divisions is itself composed of a number of supervising districts under the immediate direction of supervising teachers. The supervisor is the organizer and administrator of the schools in his district, and in the full meaning of the term a teacher who also supervises the school work." 18

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18. Bureau of Education Department of 1915 pp. 10-11  
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The division superintendent, besides being a general administrator of the schools in his division, has also a direct charge of the high schools in his division, appoints teachers for the municipalities, determines school sites, prepares reports to the Director, keeps records, and determines the expenditure of the allotment for school buildings. He



conducts teachers' institutes, and in fact does everything for his division as the Director does for the entire school system. In doing this vast work, the division superintendent is assisted by the principal of the high school, the supervisors of the school districts, the industrial supervisor, and by a local Municipal Board<sup>19</sup> composed of four or six mem-

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 19. Brown, A.J. "New Era in the Philippines" p. 250  
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bers in addition to the "presidente" or mayor of the municipality who is an ex officio member of the board. One-half of the members is elected by the municipal council and the rest of the members are appointed by the superintendent upon the recommendation of the teachers.

In table II on the following page is shown for a period of 10 years, the number of schools for each type, number of teachers, supervisors, and number of pupils by courses per teacher. The number of pupils per teacher is computed on the basis of the average daily attendance. In looking over this table, we can see that the number of supervisors has a tendency to increase, but at the same time the number of pupils, and the number of teachers is increasing for each type of school, and so if we may infer anything from this fact, we can say that an effort is being made to improve the system of supervision. If we look over the column which reads "number of children per teacher", we find the fact that there is a general tendency for a decrease in the number of pupils



TABLE II

Table Showing Number of Teachers for each Type of School and Number of Pupils by Courses per Teacher Based on the Average Daily Attendance. Data Taken from the Reports of the Bureau of Education for the Same Years.

Years	Type of Schools		Av. No. Teachers for Each Type				No. Children per Tchr.			
	P	I	H.S.	I	H.S.	Ac., Ind.	P	I	H.S.	
1911	4121	245	38	1.84	3.21	3.52	396	43.87	24.28	16.04
1912	3364	283	38	1.95	2.46	3.05	404	46.14	32.63	29.99
1913	2595	296	43	2.15	2.23	3.65	321	46.14	38.32	30.63
1914	3913	378	44	1.88	2.90	3.81	309	53.15	38.35	33.01
1915	3837	309	41	1.95	3.02	4.65	314	53.32	37.33	33.51
1916	4020	349	43	2.04	3.11	5.33	269	50.45	38.32	33.96
1917	4084	364	45	2.24	3.55	5.95	258	48.90	36.23	35.95
1918	3985	411	47	2.58	4.31	2.14	305	42.79	29.68	36.79
1919	4057	483	49	2.68	4.96	8.59	363	37.80	16.51	32.08
1920	5280	614	50	2.39	4.76	8.92	433	39.73	24.45	31.84

Explanation:

P-Primary; I-Intermediate; H.S.-High School; Ac., Ind.-Academic and Industrial

1. See page 14.



per teacher in each course. This means that there is also a corresponding decrease of supervisory necessity. This cannot be taken, however, as the final index for an efficient supervision. Several factors must be taken into consideration before the degree of efficiency of the system of supervision can be determined. Among these factors the size of the supervisory field may be considered as one. A supervisor may be well trained and efficient in his work, but if he tries to cover a very wide area his work could not be effective. This condition is being effectively remedied in the school system in the Philippines. The superintendent of the division, being the central school authority in his division, usually sees that the number of supervisors is generally distributed to the district where they are most needed. The second factor which determines the degree of efficiency of the supervisor is his knowledge of the various phases of public school education and his ability to demonstrate and to explain the best method of teaching to the teachers under him. This matter obviously depends upon the training of the supervisor. In the Philippine educational system, to meet this problem, a "two year course for supervising teachers and principals is now being given in the Philippine Normal School." <sup>20</sup> The third

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 20. Bureau of Education Report of 1919 p. 18.  
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factor is the system of the supervisory scheme. That is, to



help and to facilitate the work of the supervisors, the teachers should be provided with some agencies for training themselves, such as reading courses, teachers' institutes and meetings. The Philippine supervisory scheme does not only provide these, but the Bureau itself annually sends deserving teachers<sup>21</sup> abroad or to the Normal School in Manila for further training in the supervisory field. In December 1920, 45 teachers were sent to the United States and 56 to the Normal School in Manila. All these facts seem to indicate,

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 21. Bureau of Education Report of 1920 p. 27  
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therefore, that even the supervisory system in the Philippine public schools is far from being efficient, and satisfactory, but the facts indicate that the Bureau is pursuing a definite program to meet the future needs.

#### PART IV

##### The Teaching Staff

One of the problems encountered by the army authorities in reopening the schools in the Philippines was the problem of teachers. Most of the Filipino teachers who were teaching schools were poorly trained, and most of the American teachers were discharged soldiers who also did not have the training as well as the proper education to fit them for the teacher's service. To meet this problem, the



first Commission authorized the employing of teachers from the United States. The full number was never realized, but in 1901, 765 teachers arrived in the Philippines. More teachers came annually to take the places of those who resigned. These teachers rendered a great service for they did not only act as teachers in the class rooms, but they had charge also of the training of the native teachers under them. They did also other invaluable work<sup>22</sup> in the community

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 22. Freers, W.B. "The Philippine Experience of American Teachers" pp. 97-121  
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where they worked, for they sometimes acted as nurses in times of epidemic or as adviser in matters of municipal affairs. Their numbers, however, was destined to be less and less as the years passed on. The places are being gradually taken by the native teachers who are trained both in the home land and in the institutions of the United States for the teaching service. This fact is clearly shown in the following table which gives the number of American and Filipino teachers in the different grades by years, for a period of ten years from 1910 to 1920.

From this table we will notice that the number of Filipino teachers is increasing in all grades while the number of American teachers is decreasing in all grades except in the secondary schools which means that American teachers are more needed in this branch of the school system.

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TABLE III<sup>1</sup>American and Filipino: Relative Number of Teachers Engaged  
in Academic Work

Years	Primary		Intermediate		Secondary		Supervising	
	Am.	Fil.	Am.	Fil.	Am.	Fil.	Am.	Fil.
1911	21	525	295	366	118	15	249	148
1912	14	6549	258	497	109	7	283	150
1913	15	5585	166	494	153	4	206	115
1914	17	7362	143	663	156	12	178	131
1915	14	7495	104	832	177	17	139	175
1916	17	8214	100	986	175	56	127	202
1917	18	9498	67	142	206	62	113	208
1918	17	10273	53	1722	239	111	66	272
1919	22	10891	33	2363	246	175	51	286
1920	16	12598	24	2912	239	207	51	350

1. Data taken from Reports of Bureau of Education for the same years.

The apparent increase in the number of Filipinos in the supervisory work can be attributed to this fact. Filipinos who are trained in the normal schools in the Philippines and in the higher institutions in the United States are usually given the supervisory task, and do not stay in the regular class room work.

The question that naturally follows from this existing condition is the ability of the Filipino to teach. Table IV may throw light on this problem. The facts in this table indicate that a great majority of Filipino teachers have a very low scholastic attainment. More than 82 per cent of them are only high school students, and about 3 per cent have not even completed the intermediate grades. The tenden-



TABLE IV<sup>1</sup>

## Scholastic Attainment of Filipino Teachers

Year	Interme- diate	High School	H.S. Grad. or Col.Stud.	Normal or Col.Grad.	Holder of certificate
1911	71%	29%	None	None	None
1912	56%	42.67%	1.33%	None	None
1913	49.78%	46.64%	3.58%	None	None
1914	38.47%	57.67%	3.86%	None	None
1915	27.37%	67.50%	5.03%	None	None
1916	15.94%	77.84%	6.21%	None	None
1917	13.23%	76.89%	3.12%	3.50%	3.26%
1918	7.99%	78.78%	4.47%	3.87%	4.99%
1919	4.35%	80.14%	5.33%	4.56%	5.62%
1920	2.98%	42.38%	5.35%	4.63%	4.66%

1. The data is taken from the Bureau of Education Reports for the same years. The result in per cent is obtained by dividing the number of teachers of the same attainment by the total number of Filipino teachers employed during the calender year. By "attainment" here is meant the academic attainment or the grade which the individual has completed.

cy, however, shows clearly that the attainment of the Filipino teachers is gradually improving, a fact that is hopeful for the Philippine public school system. If we look back to table 3 however, we will notice that most of the Filipino teachers are engaged in teaching the primary and the intermediate grades, while the great majority of the teachers in the secondary schools are Americans.

It is apparent from these facts that the great need of the Philippine public schools is native teachers of much higher attainment and training, since the American teachers, with the exception of the teachers of English, will be re-



placed eventually by the Filipino teachers.

The Bureau of Education realizes this need, and various agencies<sup>23</sup> for training teachers are at present being

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 23. Bureau of Education Report for 1920 p. 24  
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conducted. Among these agencies are the College of Education in the University of the Philippines, the five Philippine normal schools, and the normal courses in the provincial secondary schools.

Besides these schools, there are other agencies which prepare the Filipino teachers for efficiency in their service. These are the vacation assemblies which are held in the summer camp at Baguio every summer; the summer schools which are held in a number of school divisions every summer; the normal institutes which are held in nearly all the school divisions at the beginning of the school year; the model classes which are conducted in a number of municipalities; and the various reading courses and teachers' meetings. But one of the most important schemes which the Bureau has to help improve the professional ability of the Filipino teachers, is the sending of a group of Filipino teacher to the United States every year.

In connection with the training of teachers, is the problem of the teachers' salaries. At present, as is shown in table V, the teachers are too poorly paid. In 1920 the average monthly salary of the municipal teachers was forty pesos

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TABLE V<sup>1</sup>

## Average Monthly Salaries of American and Filipino Teachers

Year	Average Salary Municipal Teacher in Pesos	Average Salary Insular Teacher in Pesos.	Average Salary American Teacher in Pesos
1911	17.68	37.46	215.29
1912	17.68	39.78	215.88
1913	21.25	45.33	230.72
1914	22.05	45.33	218.73
1915	22.05	54.12	219.58
1916	22.88	53.91	215.82
1917	23.98	52.99	208.41
1918	37.49	57.32	207.52
1919	37.49	70.79	258.57
1920	40.00	80.81	271.48

1. The data here is obtained by dividing the annual sum of the money paid for salaries by the number of teachers employed in that year. Thus the annual sum paid for the salaries of the insular teachers is divided by the total number of insular teachers employed. The Filipino teachers are divided into two groups. The insular teachers are teachers paid from the fund of the insular government, and the municipal teachers are paid by the municipality.

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or \$20. The insular teacher received an average monthly salary of 80.81 pesos or \$40.40 per month. The smallness of this salary can be fully comprehended if we look at table V.

The average salary of an American teacher is 271.48 pesos or \$135.74, or more than four times the insular teacher's average monthly salary, and more than eight times that of the municipal teacher. This wide discrepancy in the teachers' salaries can be partly explained in terms of the relative attainment of the Filipino and American teachers, and the fact that the Philippine Government has to compete

Average Monthly Salary of Teachers

Year	Average Monthly Salary - District	Average Monthly Salary - State
1906	41.00	41.00
1907	42.00	42.00
1908	43.00	43.00
1909	44.00	44.00
1910	45.00	45.00
1911	46.00	46.00
1912	47.00	47.00
1913	48.00	48.00
1914	49.00	49.00
1915	50.00	50.00
1916	51.00	51.00
1917	52.00	52.00
1918	53.00	53.00
1919	54.00	54.00
1920	55.00	55.00

1. The data here is obtained from the monthly reports of the State Department of Education for the years 1906-1920. The money paid for salaries in that year is divided into three groups: the first group is divided into three groups, the second group is divided into three groups, and the third group is divided into three groups. The data here is obtained from the monthly reports of the State Department of Education for the years 1906-1920.

The average monthly salary of teachers in the State of Ohio for the years 1906-1920 is shown in the table above. The average monthly salary of teachers in the State of Ohio for the years 1906-1920 is shown in the table above. The average monthly salary of teachers in the State of Ohio for the years 1906-1920 is shown in the table above. The average monthly salary of teachers in the State of Ohio for the years 1906-1920 is shown in the table above. The average monthly salary of teachers in the State of Ohio for the years 1906-1920 is shown in the table above.

with the salaries offered to the American teacher in the United States. But in case of equal attainment the salaries of the American teacher and the Filipino teacher should be about the same. Sometimes some individuals claim that since the American teacher has to live in a higher standard of living, that therefore he has to be paid more than the Filipino teacher. This is a purely false assumption. The fact is that an average educated Filipino maintains just as high a standard of living as any average American family.

The fact, however, that the Philippine Government is willing to pay a high salary to the American teacher is indicative of the government's effort to give to the children better instruction, and a chance to learn the American ideal through these men and women.

As table V indicates, the monthly average salary of the teachers is gradually increasing from year to year. In the case of the Filipino teacher, however, the salary is still too small to enable him to support a family and stay in the service. It is apparent, therefore, that this is one of the weaknesses of the Philippine public schools. Most of the teachers do not remain permanently in the service, and usually leave at the time when experience and training would be greatly needed. When they leave, inexperienced individuals usually take their places and the training has to be done over again.

with the salaries offered to the United States. But in case of a... of the American... about the... the American... living... this is a... that a... standard of living... The fact, however... will... directive... better instruction... of through these... As... the teachers... the case of the... still too small... in the service... of the weaknesses... the teachers do not... usually... would be greatly... individuals... be done over again.

Clearly, therefore, one of the needs of the Philippine educational system is a force of Filipino teachers of good training and higher scholastic attainment. Every year the Bureau suffers a great deal by losing some of the able teachers who accept positions in the other lines of work which pay better. The only remedy for this is to give them a much better salary or some inducement that will keep them in the public school service.

## PART V

### The Curriculum

The policy that has always been followed in making the curriculum of the Philippine public school system is well defined in the 1918 report of the Director of the Philippine Bureau of Education. From this report I quote in part the following: "Public schools fulfil their true duties only when they adapt themselves to the social needs of the time and of the place in which they are established. Hence it is fundamentally essential, in planning a system of schools or in establishing new schools, that a careful study be made of the social conditions of the community and of the ideals and the interests of the people concerned. A system of schools inaugurated without consideration of such conditions or perpetuated without careful study at frequent intervals, must prove inadequate to meet real educational needs." 24

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 24. Bureau of Education Report of 1918 p. 18  
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In the effort to follow closely this policy of giving instruction to the children, educators in the Philippines have been studying the condition of the country for the last twenty-two years. Their aim is to found schools and to produce courses of study that will meet the needs of the people of the country.

In building the courses of study certain principles have been followed, and here I quote again from the 1918 report of the Director. "To-day", he says, "educational theory, based on physiological, psychological, and sociological studies of children, leads definitely to the conclusion that elementary education should be nearly uniform in character for all. .... By the time the period of adolescence is reached, the child will have been acquainted, in a general way, with the world's most important interests which will allow him to employ his powers more or less effectively. He will have been made conscious of the common forms of vocational activity, and he will have gotten a glimpse of the roads that lead toward these forms. The youth who has just entered the state of adolescence should not be forced into a life career nor should he be left to plan his life career alone and unguided."

"In the elementary school", to quote further from this report, "the child needs and instinctively seeks some

In the report of the Director of the Bureau of Education

for the year 1911, it is stated that the Bureau of Education

has been studying the conditions of the schools in the

country for many years. Their aim is to improve the

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effective.

In building the Bureau of Education

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older person to advise him, and to choose for him, a fixed and definite curriculum, is advisable and defensible. When the student becomes an adult with trained judgment, no one should presume to prescribe for him a definite course of procedure. But during the transitional period--the period between dependent childhood and independent maturity--there should be a gradual training in choice, a gradual relaxation of external authority and direction, and a gradual increase in the exercise of his own powers of formulating analysis, judgments, and volitions."

With this definite principle in mind, and with the knowledge of the general condition of the country and its people, three types of study have been evolved in the Philippine public schools--one for the elementary school pupil, one for the secondary school pupil, and one for the college or the university student.

In planning these three types of study, however, provision for gradual transition from one type to another has been introduced, and constant changes to meet the requirements have been made from year to year.

The whole field of study is divided into two groups--the elementary and the secondary groups.<sup>25</sup> The first group

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 25. Bureau of Education Bull. No. 7  
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is divided into two courses--the primary and the intermediate. The primary course is composed of the first three



grades, and upon the satisfactory completion of this course the pupil is transferred to the intermediate course. In this second stage of the child's instruction, opportunity for various exposures to some particular line of training is provided. The course which is composed of three grades is so arranged that a pupil who chooses or enrolls in a definite vocational course, can have sufficient training after the completion of the course to prepare him for his life vocation. The graduate of the intermediate can go to the high school, and pursues the line of study which he has been following in the intermediate grade, or if he takes the vocational course, he can immediately transfer and pursue his study in the school of Arts and Trades in Manila or in the school of Agriculture in Los Banos. The teaching course was previously given in the intermediate grade, but with the cry for more highly trained teachers and with more material available for higher grades, the course has been recently eliminated.

The secondary course is given in the Provincial high schools and in the Insular schools of secondary character. The field of study is divided into a general course, a teaching or normal course, a commercial course, a trade course, and a course in surveying and a nautical course. These courses are given not only to prepare the students for advanced instruction in the technical schools, in colleges, and in

grades, and upon the attainment of the second grade the pupil is transferred to a school where the second grade of the child is the first grade. Various expenses of the particular kind are provided. The course which is covered is arranged that a pupil may attend vocational courses, and have credit for completion of the course to progress in the school. The graduates of the school are given the same treatment as the graduates of the school, and receive the same treatment. Following is the description of the international course, he can attend the school in the school of Agriculture in Los Angeles. The course was previously given in the International City for more highly trained teachers and available for higher grades, the course is eliminated.

The secondary course is given in the schools and in the International City. The field of study is divided into the following or normal course, a complete course, and a course in agriculture and a course in the field of study. The field of study is given not only to persons in the field of instruction in the school of Agriculture in Los Angeles.

the University of the Philippines, but also to give them a certain amount of technical training to fit them for life.<sup>26</sup>

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 26. Bureau of Education Bull. 26, p. 7  
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Beginning with the intermediate grade, all promotion is based upon a general examination, which is given at the end of the school term, in all subjects.

An average of 75% is required to pass the course. Recently a satisfactory mark in English is required in the high school course before the student can be promoted. This recent ruling is rather remarkable in that it shows the trend of thought of the general Filipino public in regard to the making of English their common language.<sup>27</sup>

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 27. Bureau of Education Report of 1920 pp. 18-20  
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The accompanying chart shows the subjects taught in the three courses:

28

Primary course (Grades I, II, and III)

- Language: (Spelling, reading, and writing.)
- Arithmetic: All combinations of number from 1 to 100.
- Geography: General information.
- Supplementary instruction in citizenship.
- Industrial work.

Intermediate course<sup>29</sup>

- Language and grammar: Element of grammar and composition, text book and supplementary readings.
- Arithmetic: Fundamentals of integers, compound and decimal fraction, and the metric system.
- Geography: Advanced geography.
- Science studies: Animal, and plant life, physiology, and hygiene.
- Government: Government of the Philippines with particular emphasis on municipal and provisional government.



## Industrial work.

The secondary course <sup>30</sup>

- Literature: Advanced grammar, prose and poetical selection, composition, rhetoric, study of drama, novel, and essay.
- History: Ancient, mediaeval, American history, colonial history, and civics.
- Mathematics: Algebra, plane and solid geometry, trigonometry, surveying.
- Science: Botany, zoology, physical geography, geology, physics, chemistry, and agriculture.
- Language: Latin, Spanish, French, and German.
- Political economy, commercial law, elementary economics, bookkeeping, practice teaching, industrial subjects.

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 28. Bureau of Education Bull. No. 7, p. 10-11

29. Ibid.

30. Bureau of Education Bull. No. 26, pp. 7-12  
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Both in the intermediate and in the secondary schools the study is arranged by courses, as the general course, the teaching course, the trade course, the household art course, and the commercial course. Every student who enrolls in any one of these particular courses, has to follow the program prescribed for that course, and if any change is wanted by the student or if he wishes to transfer from one course to another he has to apply for the approval of the superintendent through the principal.

The question, of course, is whether such an arrangement of the program of studies does not interfere with the individual initiative in the selection of subjects which he wishes to take, and whether it is so arranged so that in case of transfer from one course to another the pupil will not

The secondary course

Industrial education is a branch of education which is concerned with the training of the young people in the various trades and occupations of industry.

The secondary course is a course of instruction which is designed to prepare the young people for the various trades and occupations of industry.

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The secondary course is a course of instruction which is designed to prepare the young people for the various trades and occupations of industry.

38. Bureau of Education Bulletin No. 11, 1911

39. Ibid.

40. Bureau of Education Bulletin No. 22, 1911

Both in the secondary course and in the industrial course

the study is a course of instruction which is designed to prepare the young people for the various trades and occupations of industry.

Industrial education is a branch of education which is concerned with the training of the young people in the various trades and occupations of industry.

and the industrial course is a course of instruction which is designed to prepare the young people for the various trades and occupations of industry.

one of these courses is a course of instruction which is designed to prepare the young people for the various trades and occupations of industry.

prescribed for that course.

the student or if he wishes to transfer from one course to another

another he has to apply for the transfer.

ent through the industrial course.

The question of a course of instruction which is designed to prepare the young people for the various trades and occupations of industry.

ment of the program of instruction which is designed to prepare the young people for the various trades and occupations of industry.

individuals interested in the industrial course.

wishes to take, and he has to apply for the transfer.

of transfer from one course to another.

lose anything.

Personally I am inclined to think that this scheme of arranging the courses does not in any way interfere with the pupils initiative. In the first place the pupil has to enroll himself in some kind of course, and it would be much better for him to enroll in one of the courses that is definitely planned for him through his intermediate and high school years rather than to pick up at random any subject that he wishes to take. The scheme allows the student's initiative to function in the choice of a definite course that is well planned for him, and his future career. Again, as a general rule the children at this age are not careful of what they are going to study, They are, more or less, dependent upon the suggestion and guidance of their teachers, or their principal or some of their parents and friends who tell them that they are well fitted for this career rather than for that career. It would be much better, therefore, to have men who are trained and expert in these particular fields of study outlined in the course for them and give them the necessary guidance in the choice. As for the case of transfer which might be made after the pupil has already started the course, the program is so arranged that this could be done without much time lost

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 31. Bureau of Education Bull. No. 26, pp. 7-11  
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on the part of the student.

page 39

In table VI/the relative number of children enrolled

Personally I am inclined to believe that

arranging the course for the students and

public institutions. In the first place, the

himself in some kind of course, and it is

for him to enroll in one of the courses

planned for him through it is better to

years rather than to look up his own

wishes to make. The other side of the

function in the choice of a definite course

editorial, and his future career. Again, as

children as this is the not careful of what

to study, they are, and of course, when

and guidance of their parents. Their

their parents and friends. It is

littered with errors and it is better to

be much better, therefore, to have an

expert in these particular things

course for them and give them the

choice. As for the case of those who

for the pupil has already been

so arranged that this is a

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31. Bureau of Education, U.S. Dept. of

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on the part of the student.

page 39  
In table 1, the following

TABLE VI<sup>1</sup>

## The Enrollment of Intermediate Pupils by Courses

Year	General	Teaching	Trade	Farming	Housekeeping and Household Arts
1911	16,806	731	1285	544	392
1912	13,855	3116	2082	1955	1403
1913	13,121	3706	2293	3287	2635
1914				1153	
1915	21,198	5328	2932	1163	608
1916	23,129	7412	3582	1380	5917
1917	36,826	7237	3510	1662	7585
1918	35,999	1861	300	1721	9449
1919	41,053	41	2607	1947	11,744
1920	52,971		2511	2068	15,550

1. Data taken from the Appendixes of the Bureau of Education Reports of the same years. In the year 1913 the data was not given, and the teaching course was taken out since 1919 from the curriculum of the intermediate grade.

by courses in the intermediate grade, for a period of ten years is shown. From this table we may infer that the general tendency to an increase in enrollment is toward the two courses, the general course and the course for household arts. The enrollment of the latter, however, is composed wholly of girls, while the enrollment of the former is composed of both sexes. The enrollment in both the trade and farming courses seems to remain constant while the enrollment in the teaching course reached its highest limit in the calendar year 1916 to 1917 and gradually dropped down until it had only an enrollment of 41 pupils in the calendar year 1918 to 1919. The reason for this is probably the fact that the teachers' profession is the lowest paid profession in the



Philippines. And since the commercial field is offering a comparatively much better return, a great many of the pupils enrolled in the general course where they could study the subjects which are prerequisite to the commercial course offered in the high schools and in the colleges--a fact which is a clear warning to the Bureau of Education.

The graduates of the high schools can either go to the Insular technical schools and private colleges,<sup>32</sup> or en-

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 32. In the Philippines there were in 1919, 157 private primary schools, 90 intermediate schools, 35 high schools, and 18 colleges recognized by the government.  
 Facts and Figures about the Philippines, p. 21  
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ter the University of the Philippines which is giving courses in liberal arts, science, education, medicine and surgery, dentistry, pharmacy, agriculture, veterinary science, engineering, law, forestry, music, and fine arts.

Lastly, one of the most important parts of the Philippine public school system is its system of physical education. The system of physical training has developed from a mere random play outside the class room in the early beginning of the present school system into one of the most important integral parts of the public school curriculum. From the fourth grade of the elementary schools through the high school, every pupil is required to have at least a 75 per cent rating in physical education before he can be or she can be, promoted. This does not mean, however, that the pupil

Philippines. And as a result of this  
consequently much better results  
enrolled in the school  
feels that the progress of the school  
of a high school in the Philippines  
a clear way to the future of the school.  
The progress of the school in the Philippines

the progress of the school in the Philippines  
22. In the Philippines, the progress of the school  
primarily a result of the progress of the school  
and is a result of the progress of the school  
facts and figures about the progress of the school

sex and character of the school in the Philippines  
see in the progress of the school in the Philippines  
environment, character, and progress of the school  
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facts and figures about the progress of the school

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the progress of the school in the Philippines  
school, every year  
sent letters to the progress of the school in the Philippines  
can be, progress. The progress of the school in the Philippines

must develop technical skill. This is not the direct aim.

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33. Bureau of Education Report of 1920, pp. 40-42  
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of physical training as it is conceived in the Philippines, but rather to develop and to remedy the defects of the body of all the pupils through a well regulated system of both indoor and largely outdoor exercise where everybody participates.

To make this program of physical training effective, play ground instructors are being especially trained to take charge of the play ground movement which is being rapidly introduced throughout the entire islands. Out of these group exercises girls and boys who show special fete in physical ability are selected to compete in the interscholastic and interprovincial athletics which are held every year in the provinces and in Manila. In addition to these various contests the "Philippine Interscholastic Association" competes with the various athletic associations of the far Eastern countries. <sup>34</sup>

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34. Bureau of Education Reports of 1920, p. 42  
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PART VI

School Buildings and Grounds

One of the problems that was encountered in the early

must develop technical skills and must be able to work with

33. Bureau of Vocational Education

of physical training and health. The Bureau of Vocational Education  
but rather a more general one. The Bureau of Vocational Education  
of all the other departments. The Bureau of Vocational Education  
indoor and outdoor sports. The Bureau of Vocational Education  
quarters.

To make this program of physical training and health  
play a more important role in the development of the  
character of the young men and women. The Bureau of Vocational Education  
introduces a research program. The Bureau of Vocational Education  
exercise this and play a more important role in the  
ability to work in the field of physical training and health.  
interpersonal relations. The Bureau of Vocational Education  
provision and to health. The Bureau of Vocational Education  
tests the physical fitness of the young men and women.  
with the various scientific methods. The Bureau of Vocational Education  
countries.

34. Bureau of Vocational Education

school activities.

One of the problems that the Bureau of Vocational Education

reorganization of schools was the problem of school buildings. The first school houses were the old schools or some old Spanish chapels that were used as barracks. In some cases, classes were held in the open air under some shades of trees. 35

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35. Bureau of Education Bull. 37, p. 12  
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The school authorities immediately saw the problem and the policy to encourage the building of permanent building, was early launched. The Insular government passed legislation after legislation appropriating thousands of pesos (one peso equals fifty cents in American money) for the building fund. In 1906, 350,000 pesos was appropriated for the erection of the intermediate and the high school buildings, and in the next year a sum of 650,000 pesos was added to this amount. In this same year a very notable event in the history of the Philippine public school system occurred. The In-

36  
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36. Ibid. pp. 13-14  
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tion of barrio schools. All together with the other smaller bills the amount reached 4,149,000 pesos or \$2,075,500 in 1911.

In planning for the building of school houses it was necessary to use the type of buildings that is simple but at the same time will give maximum efficiency. The materials



should be also of the type that would withstand the Philippine weather. In pursuance of this policy, the following points are considered as guides to the building program:

The preparation of a set of standard plans which provide for a "unit"<sup>37</sup> system of construction.

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 37. By "unit" is meant that the first unit of the building may be built, and in case the community grows, another unit may be added to it without injury to the original structure.  
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The selection of suitable sites

A preparation for a creditable and a decent standard for temporary buildings.

A plan for the proper care and maintenance of school houses and grounds.

A plan for equipping the school building with the necessary furniture and appliances of simple but substantial character.

In order for the municipality to obtain the insular building fund, the municipal council should apply for it.

The application<sup>38</sup> should state, and this should be certified

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 38. Bureau of Education Bull. No. 3, pp. 30-32 School Buildings and Grounds  
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by the division superintendent, the number of attendance which must remain not below forty pupils, the amount of local fund that is available for the building, and the site of the proposed building. This application is submitted through

should be also of the type that will be  
In pursuance of this policy,  
are considered  
The one of the most important  
side for a "unit" system of organization.

37. "Unit" is a term that has been used in the past  
may be used in its original sense, or it  
may be used in a new sense.

The selection of units is  
a matter of great importance  
for a unit system.

A plan for the proper use of  
house and grounds.

offer for each of the units  
essary for the use of the  
character.

In order for the unit system  
building for the unit system  
The application should be made

38. Areas of interest  
buildings and grounds.

by the district  
which may be used for  
cal for the use of the  
the proposed

the Provincial Board to the Director by the division superintendent. When the allotment is received, construction must begin after a reasonable period of time or the allotment will be cancelled. The construction of this kind of building is undertaken by the Bureau of Public Works, and under the inspection of the Director through the Building Division.

When this system of allotment was introduced, a great deal of local stimulus was created. Each municipality desired to get its part and every effort was made to raise its portion of the quota.

The sources from which the municipality gets its funds are the following:

One per cent of the assessed valuation of land, buildings, and improvements; one-half of all the proceeds of the internal revenue tax; donations and voluntary contributions.

As a general rule the people in the community have been very generous in their contribution to this fund, and so this last item often amounts to a considerable sum. With the fund derived from these three sources, the municipal council, which has charge of the expenditure of the general municipal school building fund, often adds to this fund any surplus amount from the general fund. When the necessary fund is already realized, the expenditures of the sum allotted is placed under the discretion of the division superintendent providing, however, that he does not go beyond the estimated



sum.

With this method of financing the creation of school buildings the present number of permanent buildings was made possible. In many cases some municipalities are too poor to provide enough money to build a decent school building. But with the aid of the Insular government, the educational financial burden between the different municipalities is not only equalized, but the stimulus which makes every community do its part to the utmost is also introduced.

In table VII the number of all types of buildings is shown for a period of six years. The facts show that the number of permanent buildings has increased from 723 in 1915 to 1,046 in 1920, and the number of class rooms from 3782 to 5594. These facts are significant if we consider that of the total 3,017 temporary buildings, there are only 6,147 class rooms. If one can infer from this number, it means that the temporary buildings will gradually disappear and all the schools will be housed in the standard school buildings. The table shows also the fact that the insular government is increasing annually its financial support for the building program, and its investment per pupil attending school.

With the problem of building permanent school buildings, came the problem of selecting the school sites. To meet this problem the following plan <sup>39</sup> was adopted.

With this method of... building the... possible. It may seem... provide... with the aid of the... mental burden between the... equated, but the... the part to the... In table VII the number of... shown for a period of... number of... to 1,000 in 1950, and... to 500. These... the... class rooms. If one... that the temporary... all the schools will... ing. The table shows... experiment is... building program, and the investment... school.

With the... ing, some... meet this...

TABLE VII<sup>1</sup>

Showing Different Types of School Buildings, Number of Rooms, Total Cost and Cost per Pupil Attending Daily.

Year	Permanent Bldg.-Room		Mixed Material Bldg.-Room		Temporary Bldg.-Room		Total Bldgs.	Total Rooms	Total Expense	Cost per Pupil
1915	723	3782	383	855	955	1379	2061	6016	9,409,300.70	15.41
1916	757	4048	654	1388	969	1460	2380	6896	10,945,091.94	17.36
1917	840	4465	617	1448	1174	1912	2701	7825	11,017,911.23	16.30
1918	875	4564	741	1814	1429	2377	3035	8861	13,141,820.06	19.57
1919	919	4985	816	2029	1697	2981	3432	9995	14,301,250.27	20.98
1920	1046	5594	966	2393	2051	3754	4063	11741	17,018,171.86	21.50

1. Data taken from Reports of Bureau of Education for the same years.



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 39. Bureau of Education Bull. No. 37, pp. 21-23  
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The site should provide space large enough for buildings, and play grounds, for baseball and other games, and for a school garden.

Ten thousand square meters for a central school; and five thousand square meters for a barric school.

The site should afford access and privacy.

Usually the municipalities or the provincial government set aside lands belonging to them. In some cases, the site is donated by some private individuals, and in case no such site is available from the public land, the municipality or the provincial government purchases land that is suited for a school site.

Table VIII shows the total number of school sites, the area in square meters, and the estimated value by years for a period of six years from 1915 to 1920 inclusive.

TABLE VIII<sup>1</sup>

Number, Value and Area of School Sites

Year	No. of Sites	Area in Square Meters	Estimated Value Pesos
1915	2174	20,055,452	2,301,934.05
1916	2623	22,378,309	2,501,744.00
1917	2824	35,386,170	3,242,855.00
1918	3198	38,509,339	3,586,786.00
1919	3647	72,767,802	4,103,595.11
1920	4041	87,873,891	4,710,625.84

1. Data taken from Bureau of Education Reports of same years  
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The facts show a remarkable increase in the number of school sites from 2,174 in 1915 to 4,041 in 1920, a gain of 1,867 in school sites and 67,818,430 square meters in the area. This is significant, because it shows that an effort is being made both by the Insular and the local governments in providing adequate lands available for the school grounds. Incidentally, the apparent increase shows that the municipalities are doing their best to furnish school sites in order to get the building allotment from the Insular government.

With the building program came the problem of furnishing the building. The school officials realized that one of the previous serious defects in the selection of school furniture was that the furniture was selected without regard to its adaptability to the individual need. Previously, durability had been the only basis of selection. The school officers realized the effect of this problem upon the health and efficiency of the pupil, and so in selecting the kinds and types of furniture for school use, a set of graded standards<sup>40</sup> was adopted. The desk, for instance, should be constructed

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 40. Bureau of Education Bull. No. 37, p. 38  
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for two pupils. It should be one meter in length and thirty-five centimeters in width, with about four per cent slope. It should have a shelf for holding books, and a groove for the pencil, and the height should be graded so as to meet the pupil's need. As for blackboards, hyoplates are preferred.

The school... school... 1887 in school... were... in... in... included... titles... to get... with... ing... the... picture... its... ity... core... still... cy... was... 40... for... five... shall... pencil... quip's...

The cleanliness of the whole building is in charge of a janitor, but the principal and the supervising teachers are held responsible for the general cleanliness of the building and its premises. As a rule the building is generally clean. The pupils are severely reprimanded if they are caught marking the walls and furniture, or scattering papers on the floors and around the premises of the school buildings. This matter of school cleanliness and respect of property is generally helped by the pupils themselves who usually take the affair in their own hands through their school organizations.

We may infer from these facts that the Philippine public school system, through its officers, is gradually and effectively meeting its building problem, and the tendency is to replace all the old temporary buildings with permanent standard buildings, modernly furnished and hygienically maintained.

## PART VII

### School Enrollment and Attendance

In the early organization of the present public school system in the Philippines, compulsory attendance<sup>41</sup> was re-

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 41. Senate Documents, 56th Congress, 2nd session, Vol. 11, p. 42 et seq. Also Brown, Arthur Judson "New Era in the Philippines" pp. 251-256  
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commended, but no compulsory attendance law has ever been es-

The effectiveness of the program

is a factor, but the primary one is the extent

of the program's impact on the

community. The program's impact

is a factor, but the primary one is the extent

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### CONCLUSION

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community. The program's impact is a factor, but the primary one is the extent of the program's impact on the community.

The program's impact on the community is a factor, but the primary one is the extent of the program's impact on the community.

established. The reason for this is that there is no need for such a law, for the Filipino parents as a general rule will do every honest thing in their power to send their children to school, and the problem therefore lies not in making the Filipino children attend school, but in providing an adequate number of schools throughout the archipelago. To meet this problem the Insular government has evolved the idea of allotting a certain sum of money to the building fund of each municipality, as has already been stated in part five of this chapter.

In table VIII, I have shown the average monthly enrollment by grades and by sexes, the total average monthly enrollment and the per cent of the total number of girls enrolled. The data show, as illustrated in graphs II, III, IV, and V on pages 55 to 59, the apparent increase of enrollment from the school year 1910 to 1911 to 1919 to 1920, and the increasing number of girls in proportion to the number of boys.

If we look at the graphs II, III, IV, and V, it is interesting to note that the enrollment falls down during the school year 1912-1913. If we look back to graph I in part II of this chapter we will notice that for the same year the number of schools has also decreased, and probably this is the reason for this apparent decrease. The fact that the fall in the enrollment is only in the primary grades (graph II) seems to establish this assumption. Furthermore, the school year 1912 to 1913 was the year when more perma-



TABLE VIII

A Table of Enrollment by Grade and by Sexes, and the Per Cent of the Total Number of Girls Enrolled by Year.

Year	Primary		Intermediate		Secondary		Total	% Girls
	Male	Female	Male	Female	Male	Female		
1911	278,909	181,117	16,778	4,922	2,513	450	484,689	38.06
1912	243,550	156,717	19,528	5,896	3,130	559	429,380	38.00
1913	194,512	121,551	21,840	6,798	4,005	748	349,484	36.95
1914	292,277	193,655	28,764	9,393	5,746	1,104	530,939	38.46
1915	297,829	196,431	33,689	12,031	6,998	1,353	548,321	38.26
1916	327,688	213,521	39,069	14,509	8,832	1,868	605,487	37.96
1917	323,835	214,505	42,851	17,762	10,961	2,638	612,552	38.30
1918	319,744	218,263	45,784	20,537	11,974	3,394	619,699	39.08
1919	355,984	256,519	53,855	27,480	11,588	3,888	709,314	40.58
1920	434,163	322,663	65,662	34,938	12,623	4,732	874,781	41.41

ment schools buildings were opened, and since these schools were located mostly in the center of the towns, it was evident that many of the children of the remote districts did not have the opportunity to attend school.

We notice from table X that the percentage of attendance based on the monthly enrollment is generally over 90 per cent, which means that the most of the pupils enrolled are retained in the schools throughout the year. In graph VI we notice that the number of pupils promoted from year to year increases, while the per cent of the failures and of those who dropped out decreases. This in part is an index of the better instruction. But if we examine table X, however, we will notice that the per cent of pupils attending the public schools daily, if computed on the basis of the total number

Table of Expenditures by Department for the Year 1911

Department	Item	Amount	Total
General Administration	Salaries	1,200,000	1,200,000
	Travel	50,000	50,000
	Printing	100,000	100,000
	Postage	20,000	20,000
	Telephone	10,000	10,000
	Office Supplies	30,000	30,000
	Repairs	15,000	15,000
	Interest	5,000	5,000
	Contingents	10,000	10,000
	Losses	5,000	5,000
Public Works	Construction	2,500,000	2,500,000
	Maintenance	1,000,000	1,000,000
	Street Cleaning	500,000	500,000
	Sanitation	300,000	300,000
	Public Buildings	200,000	200,000
	Water Supply	150,000	150,000
	Sewerage	100,000	100,000
	Electricity	80,000	80,000
	Gas	50,000	50,000
	Transportation	40,000	40,000
Education	Salaries	1,500,000	1,500,000
	Textbooks	200,000	200,000
	Printing	100,000	100,000
	Travel	50,000	50,000
	Postage	20,000	20,000
	Telephone	10,000	10,000
	Office Supplies	30,000	30,000
	Repairs	15,000	15,000
	Interest	5,000	5,000
	Contingents	10,000	10,000
Health and Welfare	Salaries	800,000	800,000
	Medical Supplies	200,000	200,000
	Pharmaceuticals	150,000	150,000
	Travel	50,000	50,000
	Postage	20,000	20,000
	Telephone	10,000	10,000
	Office Supplies	30,000	30,000
	Repairs	15,000	15,000
	Interest	5,000	5,000
	Contingents	10,000	10,000

The following table shows the expenditures for the year 1911, by department and item. The total amount expended was \$10,000,000. The largest item was Salaries, amounting to \$1,500,000. The next largest was Construction, amounting to \$2,500,000. The smallest item was Interest, amounting to \$5,000.

The expenditures for the year 1911 were as follows:

- General Administration: \$1,200,000
- Public Works: \$2,500,000
- Education: \$1,500,000
- Health and Welfare: \$800,000

The total amount expended was \$10,000,000.

of children of school age, is very low.

It is obvious, therefore, that while the public schools are able to keep almost all the pupils enrolled daily in the schools, a great majority or about two-thirds of the children are not in the public schools. This means that the public school system has not as yet satisfactorily served the community, and before it ever accomplishes its purpose, the system must reach almost all, if not entirely all, the children of school age.

page 60

As we may notice in graph VII/the number of school population attending schools daily is rather irregular from year to year, but the tendency shows progress in increase in the number of children that is being gradually reached by the public schools, as the number of school buildings increases.

Another item that we will notice in table X is the small percentage of the attendance in the secondary schools, which indicates that the degree of the scholastic attainment of the general population is rather low. Again, we will notice that the percentage that boys were of girls is low, and this means that the majority of the girls are either not attending schools or they go to the private schools. The facts in table VIII and table X, however, show that the percentage of girls is increasing from year to year and that in 1920, 41% of the total average monthly enrollment in the public schools was girls, and 37% of the

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public schools was girls, and 37% as over and against the 17% in 1911, of the enrollment in the secondary schools, was girls.

In determining the effort of the country in educating its people, we must take into consideration the service of the private schools inasmuch as they play an important part in educating the people. In the Philippines there were in 1919,<sup>42</sup> 300 of these schools with an enrollment of 38,544

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 42. Facts and Figures about the Philippines p. 21  
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pupils. These schools were recognized by the government and they were composed of 157 primary schools, 90 intermediate schools, 35 high schools, and 18 colleges.

All these facts tend to show that there is a decided progress in the Philippine school system, and that it will be only a question of years when the public schools will reach a great majority of the children. What the Philippines need is the building of more schools, and the a compulsory attendance law. It is true that the parents and the children themselves go to school without being told to do so. Still, such a law may be needed often to reach the children who by reason of the economic and the industrial necessity will no longer find it possible to go to school.

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TABLE IX

Percentages of the Total Average School Attendance and the Attendance by Grades

Year	High School Attendance	Intermediate Attendance	Primary Attendance	Total Attendance
1911	95	91	79	80
1912	97	93	83	83
1913	97	94	87	87
1914	97	94	87	88
1915	96	94	89	90
1916	96	94	90	90
1917	96	94	90	91
1918	96	94	91	92
1919	92	91	88	88
1920	95	93	91	91

TABLE I

Percentage of the Total Attendance by Grades

Year	High School Attendance	Intermediate Attendance	Primary Attendance
1911	95	91	85
1912	97	92	87
1913	97	94	87
1914	97	94	87
1915	98	94	88
1916	98	94	88
1917	98	94	88
1918	98	94	88
1919	98	94	88
1920	98	94	88

TABLE X

Number of Children of School Age (6-17 years), the per cent Attending School Daily, Average Days Attended by Each Child of School Age, per cent of High School Attendance Was of Total Attendance and per cent of Boys were of Girls in High Schools.

Year	School Population	% of Population Attending School Daily <sup>2</sup>	Average No. Days Attended by each Child of School Age <sup>3</sup>	% H. School Attendance was of Total Attendance <sup>4</sup>	% that Boys Were of Girls in the High Schools <sup>5</sup>
1911	1,445,400	27.95	24.46	2.72	17.49
1912	1,472,400	25.85	24.62	3.16	17.86
1913	1,499,500	27.06	23.87	3.88	18.57
1914	1,527,100	28.70	25.11	4.32	19.21
1915	1,655,200	27.89	24.40	4.34	19.33
1916	1,583,900	29.75	25.03	5.00	21.15
1917	1,611,600	30.82	26.27	5.62	24.06
1918	1,639,800	31.25	27.34	7.12	28.34
1919	1,658,500	30.03	26.32	8.09	33.35
1920	1,668,466	37.06	32.43	6.92	37.48

1. Bureau of Commerce and Industry, Statistical Bull. No. 2, p. 25

2. School population divided by average daily attendance

3. Aggregate days attended divided by total school population and divided by 2

4. High school attendance divided by total attendance

5. Number of girls in high school divided by number of boys

The following table shows the results of the experiments conducted on the effect of temperature on the rate of reaction between hydrogen peroxide and potassium iodide. The reaction is catalyzed by the presence of a small amount of potassium iodide. The rate of reaction was measured by the volume of oxygen gas evolved in a given time.

Temperature (°C)	Volume of Oxygen (ml)	Time (min)	Rate of Reaction (ml/min)
10	10	10	1.0
20	20	10	2.0
30	30	10	3.0
40	40	10	4.0
50	50	10	5.0

It is evident from the above table that the rate of reaction increases with an increase in temperature. This is due to the fact that at higher temperatures, the molecules of the reactants possess more kinetic energy and hence collide more frequently and with more force, leading to a higher rate of reaction.

The following table shows the results of the experiments conducted on the effect of concentration on the rate of reaction between hydrogen peroxide and potassium iodide. The reaction is catalyzed by the presence of a small amount of potassium iodide. The rate of reaction was measured by the volume of oxygen gas evolved in a given time.

Concentration (M)	Volume of Oxygen (ml)	Time (min)	Rate of Reaction (ml/min)
0.1	10	10	1.0
0.2	20	10	2.0
0.3	30	10	3.0
0.4	40	10	4.0
0.5	50	10	5.0

It is evident from the above table that the rate of reaction increases with an increase in concentration. This is due to the fact that at higher concentrations, there are more molecules of the reactants present in a given volume, leading to a higher frequency of collisions and hence a higher rate of reaction.

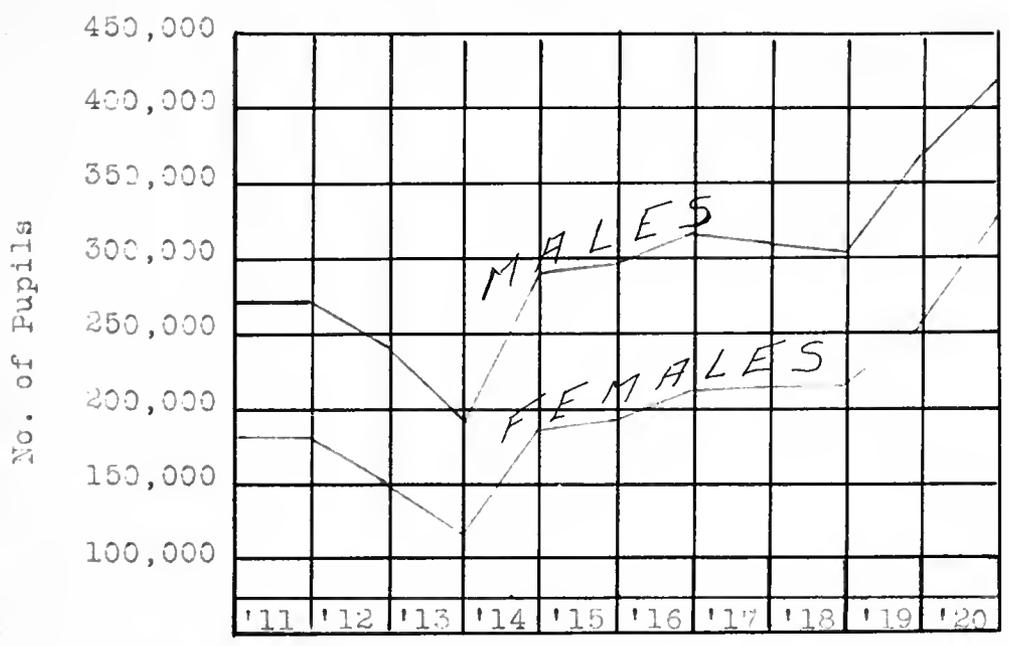
The following table shows the results of the experiments conducted on the effect of surface area on the rate of reaction between hydrogen peroxide and potassium iodide. The reaction is catalyzed by the presence of a small amount of potassium iodide. The rate of reaction was measured by the volume of oxygen gas evolved in a given time.

Surface Area (cm <sup>2</sup> )	Volume of Oxygen (ml)	Time (min)	Rate of Reaction (ml/min)
10	10	10	1.0
20	20	10	2.0
30	30	10	3.0
40	40	10	4.0
50	50	10	5.0

It is evident from the above table that the rate of reaction increases with an increase in surface area. This is due to the fact that at higher surface areas, there are more molecules of the reactants present in a given volume, leading to a higher frequency of collisions and hence a higher rate of reaction.

GRAPH II

Number of Pupils Enrolled by Sexes  
in the Primary Grades

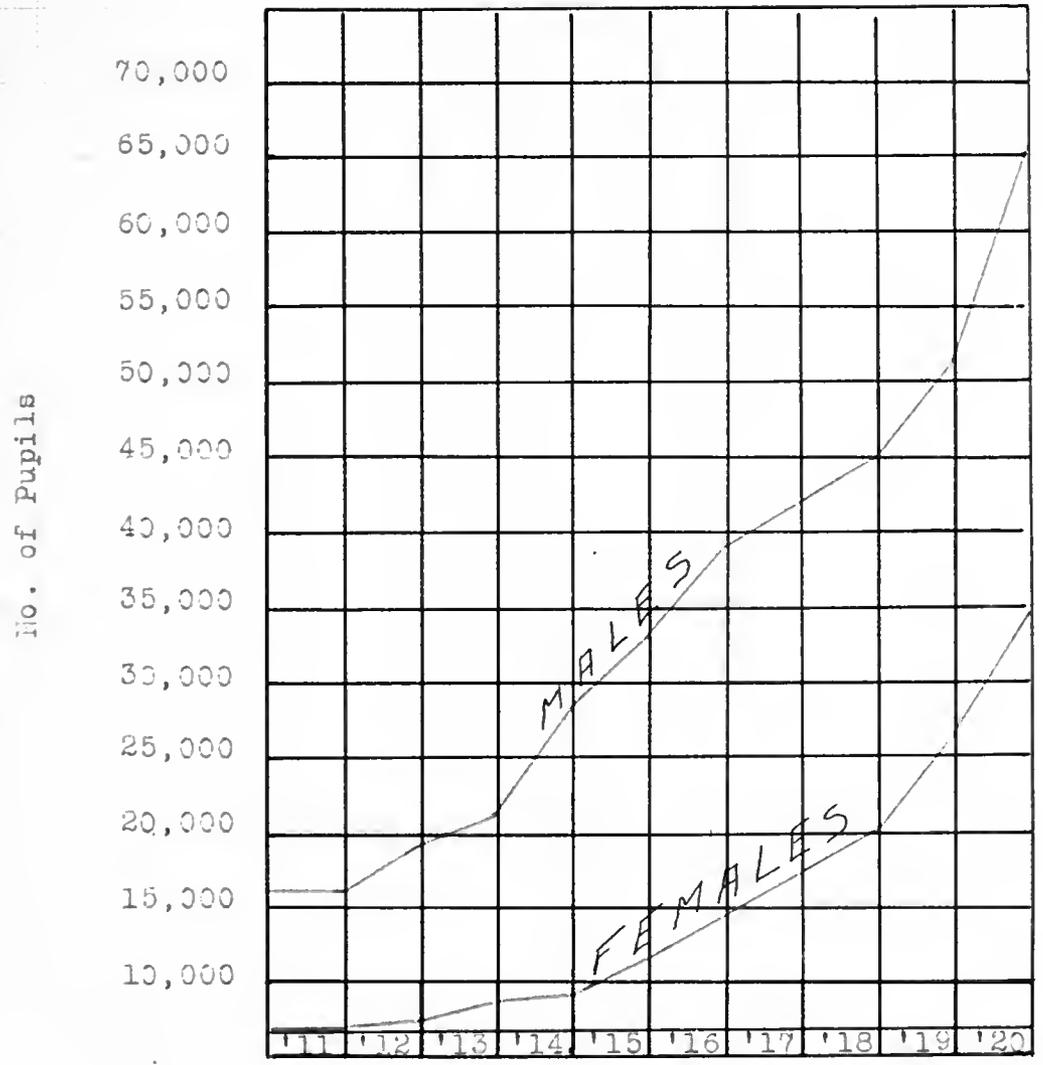


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GRAPH III

Number of Pupils Enrolled by Sexes  
in the Intermediate Grades

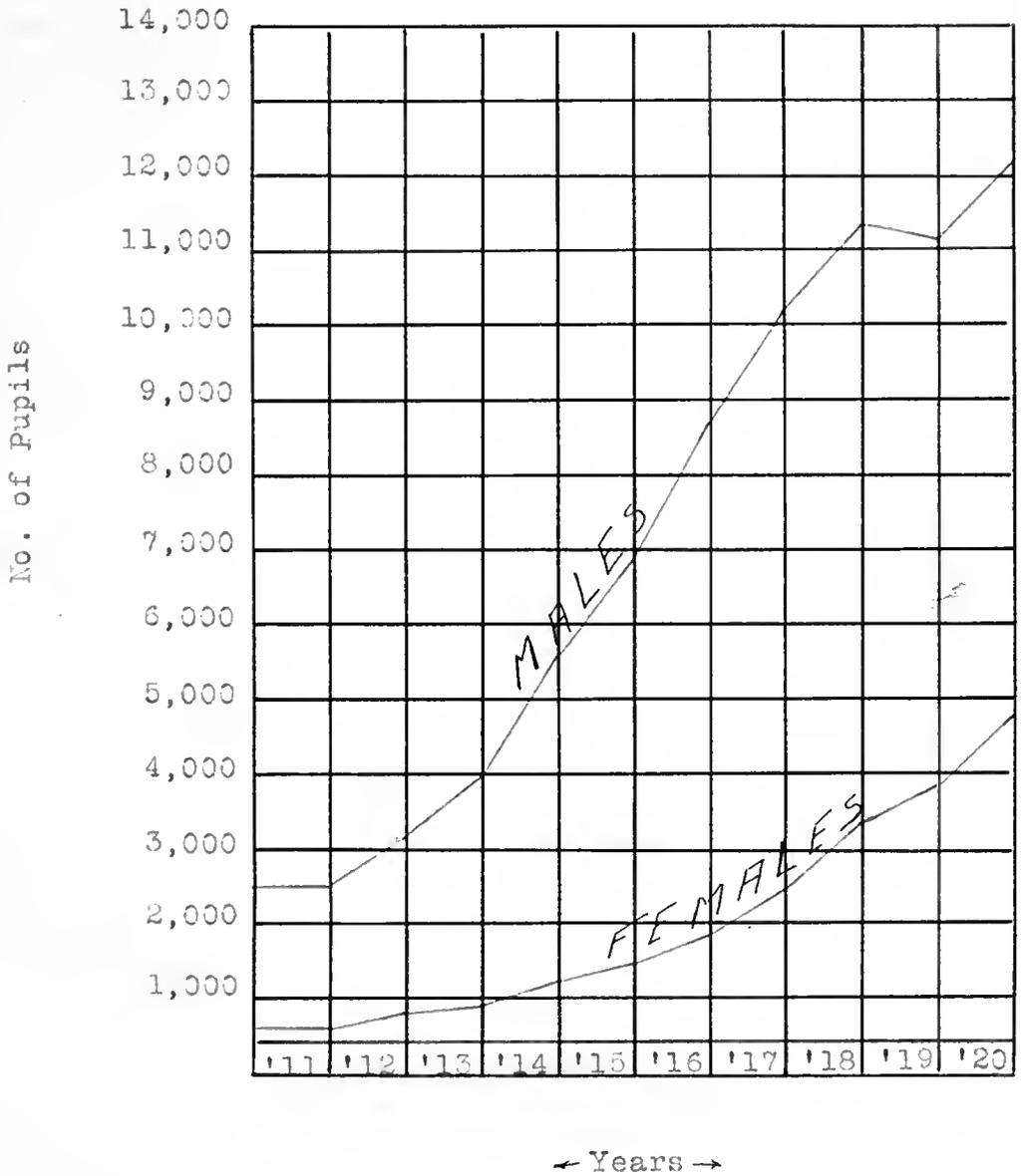


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### GRAPH IV

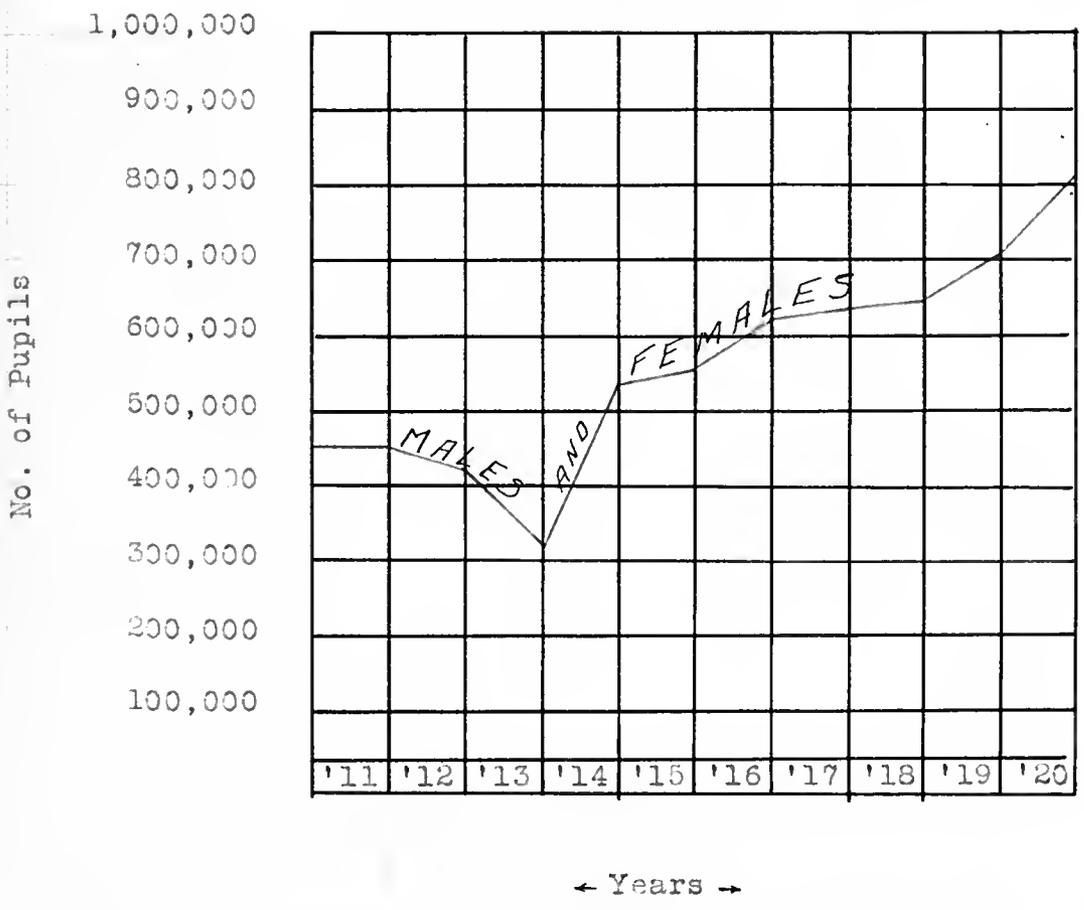
Number of Pupils Enrolled by Sexes  
in the Secondary Grades





### GRAPH V

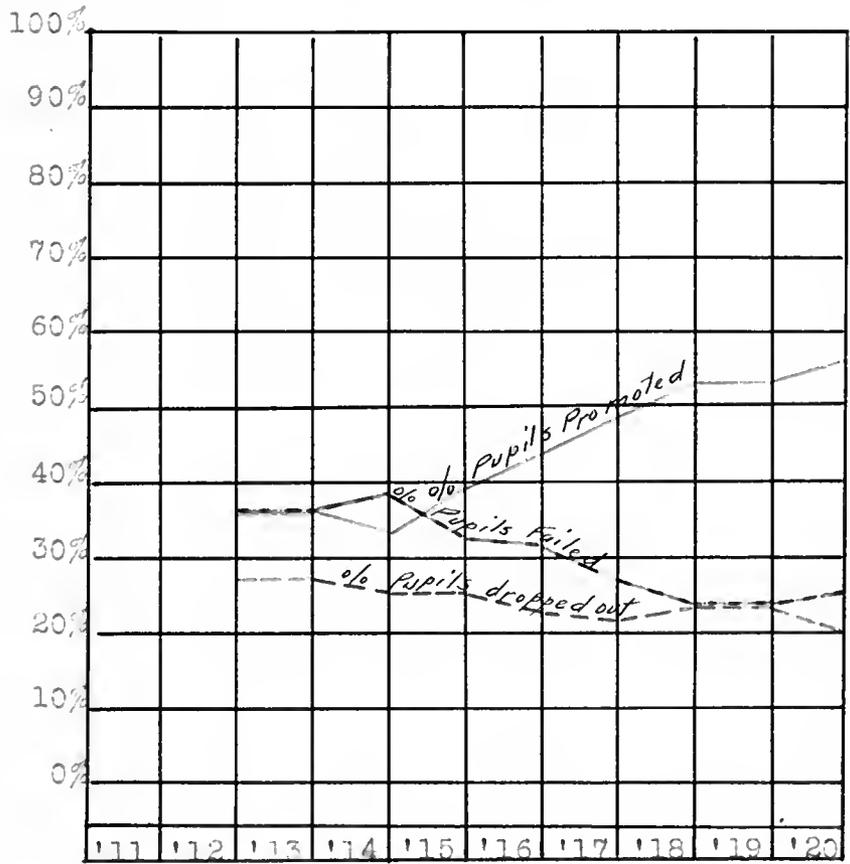
#### Total Number of Children Enrolled in All Grades by Years





### GRAPH VI

Relative Percentage of Pupils Promoted,  
Failed, and Dropped Out of School by  
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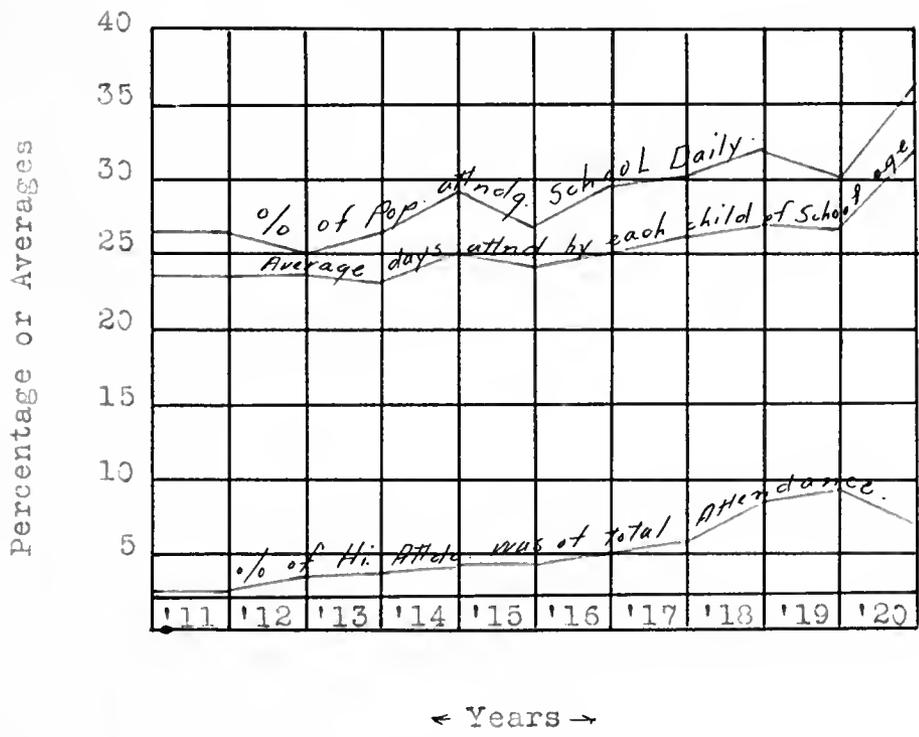


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### GRAPH VII

Per Cent of Population Attending School Daily and Average Days Attended by Each Child of School Age, Per Cent High School Attendance Was of Total Attendance. (See table X)





## PART VIII

## The School Finances

The Philippine public school system is entirely supported by the people through a well regulated taxation.<sup>43</sup>

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 43. Bureau of Commerce and Industry, Statistical Bull. No. 8  
 pp. 173-178 (1918)  
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The money for school purposes comes from three sources: from the Insular appropriation, from the provincial and municipal funds, and from voluntary contribution in the form of cash donations, free labor and gifts of land and buildings.

The Insular government pays all the expenses for the general administration of public schools, the salaries of the American and the Filipino Insular teachers, and the entire cost of the Insular school buildings, and also the greater part of the cost of the municipal school buildings.

In order to obtain the allotment from the Insular government for the school buildings, the municipal council has to send an application for it through the division superintendent with a copy and statement certified by the superintendent, stating that the average daily attendance in their municipal school does not fall below forty, the amount of money available for the school building in the municipal fund, and the description of the site where the school will be built.

Table XI indicates the sources and the amount of money

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in Philippine currency expended annually for school purposes.

TABLE XI<sup>1</sup>

The Sources and the Amount of Money in Pesos Expended Annually for School Purposes:

Year	Insular	Provincial	Municipal	Voluntary Contribution	Total
1911	3721966.49	209286.64	2156460.12	No data	6447713.25
1912	4254522.34	277272.43	2211391.36	6007.30	6748893.40
1913	4460970.95	386421.10	2455660.18	198544.46	7411496.69
1914	4589733.99	472538.29	2303304.34	344432.68	7710009.30
1915	4905296.16	443166.96	2164813.69	374982.31	7888259.12
1916	4707715.98	463843.76	2394787.79	349743.10	7916090.63
1917	5176786.48	431018.20	3614513.70	478802.61	9601123.93
1918	6067277.33	715614.63	4098806.01	617399.77	11499099.74
1919	10086449.92	468024.58	3715552.05	682549.58	15584422.14
1920	12802247.83	468124.58	3715552.05	799537.84	17785462.30

1. One peso equals fifty cents in United States currency.  
 Data used here is taken from reports of the Director of Education for the same years.

It is apparent from this table that the annual expenditure for school purposes of both the Insular and local governments is increasing. It is important to note the attitude of the people toward the public schools as is indicated by the amount of contribution which rose from 6,007.30 pesos in 1912 to 799,537.84 pesos in 1920. This apparent increase in the expenditures for school purposes is well illustrated in graph VIII. In comparing, however, the expenditures of the Insular government with its total annual expenditures for the years 1915 to 1920 inclusive, I found the interesting facts as shown in table XII.

From this table we will notice that the amount of the



GRAPH VIII

Total and the Relative Amount of Money Expended Annually for School Purposes by the Insular and Provincial and Municipal Governments:

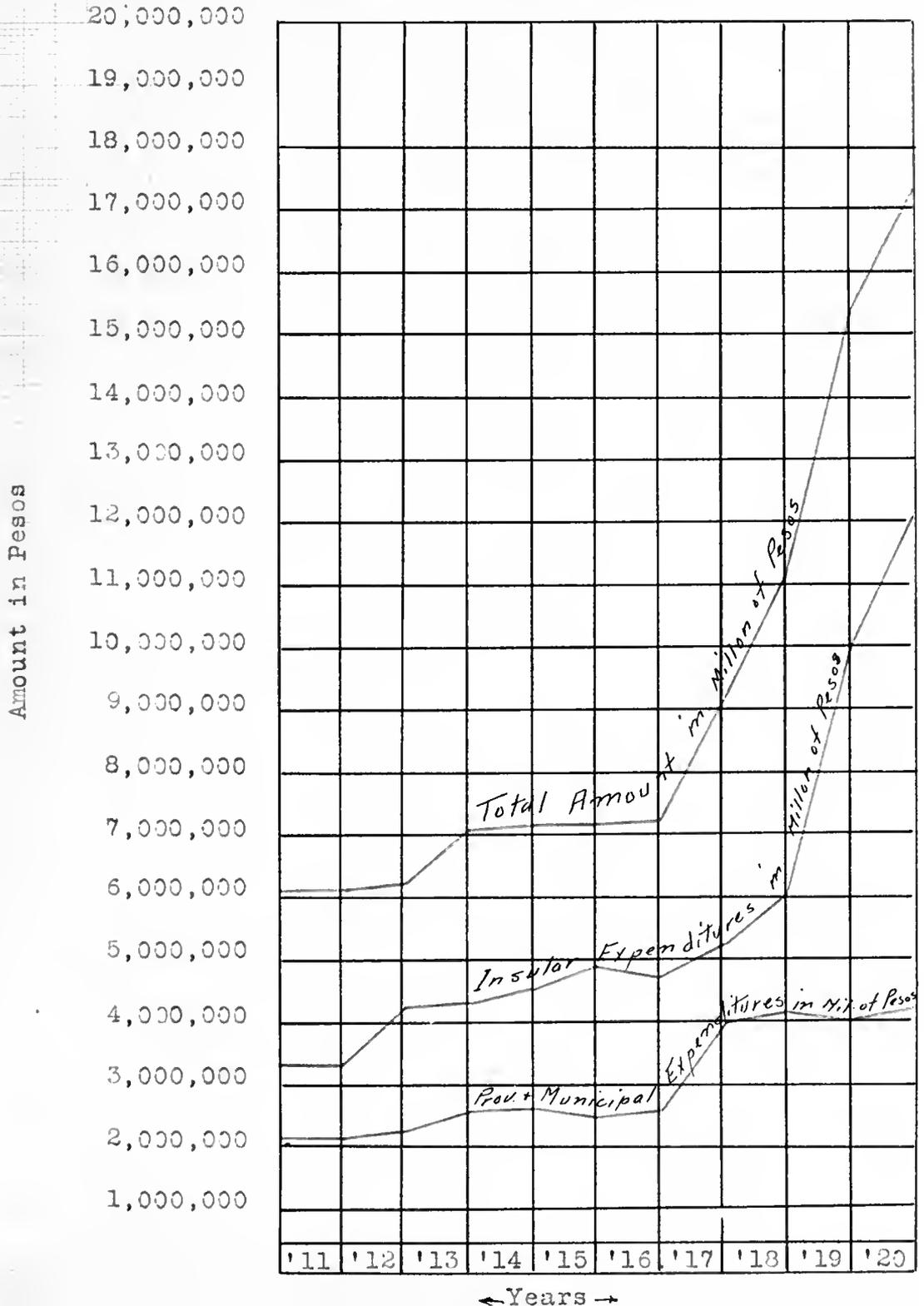




TABLE XII

The Total Annual Expenditures of the Insular Government and the Per Cent Expended for School Purposes:

Year	Total Insular Expenditures in Pesos <sup>1</sup>	Amounts in % expended for schools	Expenditures for Economic Development <sup>3</sup>	Expenditures for Education
1915	38,097,201	12	10,849,043	4,905,296
1916	40,906,813	11	14,459,203	4,707,716
1917	45,408,717	11	14,426,761	5,176,786
1918	57,496,043	11	21,349,776	6,067,277
1919	86,942,586	14	34,609,992	10,086,449
1920	114,420,460 <sup>2</sup>	11	No data	-----

1. Commerce and Industry, Statistical Bull. No. 8, p. 174, 1918; also Philippine Resources and Opportunities, p. 19

2. Data taken from Statesman's Yearbook p. 649 (1921)

3. Supra, Note 1.

Includes expenditures on conservation of natural resources, development of commerce and agriculture, regulation of public utilities, Philippine publicity, development of arts and sciences, operation of commercial and industrial units, corporate investment, and advances to railway companies.

insular expenditures for school purposes is almost constant for a period of six years when such expenditures is compared with its total annual expenses. We will note, however, that in 1919, the Insular expenditures for education were high, being fourteen per cent of its total expenses for that year, but this was probably due to the fact that in this year the first amount from the 3,919,000 Insular appropriations for general education was expended.



Another interesting fact from the data given in table XII is that the expenses for education is the second largest item for which the Insular money is expended. This fact fairly indicates the position of the Bureau of Education in the Insular government in the point of finance.

As far as the Insular support for the maintenance of the public schools, it is evident from these facts that the government has been always liberal. The problem, however, lies in the instability of the local funds for the school support. From table XI and in graph VIII, we will notice that the provincial and the municipal school expenditures in 1919 were 247,000,05 pesos less than that in 1918. This decrease has to be covered by the Insular government, and the problem, therefore, is to insure the stability of the local school fund in order that the Insular fund can be saved from such fluctuation and prevent the addition of the further financial burden to the already considerable financial burden which the government usually assumed. Furthermore, inasmuch as the Insular fund can be otherwise devoted to the further extension of popular education by strictly devoting it to the needs of the poorer communities, it should be only fair that every province and every municipality should be expected to raise a certain quota in proportion to its local wealth before such aid from the Insular government should be given. This problem can be met in several ways. Certain legislation that may either increase the tax on real estate from one per cent



to two or three per cent, the increase of poll tax, or the establishment of fixed local funds from the amount of the gross revenues accruing annually to the provincial governments.

Thus far the facts indicate that the annual expenditure for school purposes of both the Insular and the local governments has increased considerably from 1910 to 1920. The next table will indicate the annual progress of the Philippine public schools on the basis of wealth behind each child attending school daily, invested in the instruction and in the permanent improvement.

TABLE XIII <sup>1</sup>

Average Annual Cost per Child Attending Daily in Terms of the Following:

Year	Cost per Pupil in Permanent Improvements	Average Annual Expenditures per Child Attending.	Average Annual Expenditure per Child of School Age	Expenditure per Teacher for Salaries
1911	No data	18.12	5.36	35.84
1912	No data	20.50	5.30	44.28
1913	13.22	17.29	4.66	43.13
1914	12.44	16.95	4.87	38.25
1915	15.41	17.85	4.98	39.20
1916	17.36	16.80	5.00	35.45
1917	16.30	18.67	5.75	34.50
1918	19.57	22.05	6.89	44.82
1919	20.98	31.04	9.34	46.92
1920	21.50	28.76	10.65	52.44

1. Ayres' Index Number for State School System pp. 18-19

The following table shows the results of the survey conducted in the year 1980. The data is presented in the following table:

The results of the survey are as follows:

Table 1: Survey Results

Year	Percentage	Number of Respondents
1980	100%	100
1981	95%	95
1982	90%	90
1983	85%	85
1984	80%	80
1985	75%	75
1986	70%	70
1987	65%	65
1988	60%	60
1989	55%	55
1990	50%	50

In general we may infer from these facts that although there is an apparent variation every year, still there is a tendency to increase in the cost per pupil. The variation is due to the difference in the amount of money which the Insular government appropriates for instruction and for permanent improvements, and in the case of the teacher's salary the variation is due to the increase or decrease in number of Filipino teachers who receive a much lower average salary than the American teachers as I have shown in table V, part IV of this chapter.

This apparent increase, however, will not be of significance unless we have an idea of the wealth that is behind the child who is attending the school daily. According to the Report of the Bureau of Commerce and Industry,<sup>44</sup> the value of

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 44. Bureau of Commerce and Industry, Statistical Bull. No. 8  
 p. 180  
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taxable real estate property in 1918 was 755,028,060 pesos which means that for each child in school in that year there were 1,448.14 pesos behind him. As it is reported in Ayres' "Index Number for State School System" (page 39) Porto Rico's per capita wealth in 1919 was \$200 or 400 pesos. This was on the basis of the entire population, and the per capita wealth of the Philippines on the basis of the entire population in 1918 was 72.95 pesos. This means that Porto Rico has more than three times as much wealth at the back of each pupil as the

THE HISTORY OF THE UNITED STATES

The first part of the book deals with the early years of the nation, from the time of the first settlers to the end of the Revolutionary War. It covers the period of the early colonial period, the struggle for independence, and the formation of the new government.

The second part of the book deals with the period of the early republic, from the end of the Revolutionary War to the beginning of the Civil War. It covers the period of the early republic, the struggle for a stronger central government, and the expansion of the nation.

The third part of the book deals with the period of the Civil War and Reconstruction, from the beginning of the Civil War to the end of Reconstruction. It covers the period of the Civil War, the Reconstruction era, and the struggle for civil rights.

Philippines have, and yet Porto Rico spent less than twice as much as the Philippines spent for each pupil of school age, and for each pupil attending school daily. This does not mean however, that the Philippine government should feel satisfied for this reason. As I have shown, the real wealth behind each pupil attending school is 1448.14 pesos, and therefore, on the basis of the present school attendance, the government has not yet felt the burden of taxation for the school support.

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CHAPTER III

Progress of the Philippine School System by Years in Terms of Ayres' Index Number for State School System.

By way of summarizing the findings in chapter II, we found that the Philippines have a progressive public school system liberally supported by the government, and that this system is centrally controlled and that at present, the weakness of the system lies in the great majority of its teachers of low scholastic attainment, and in the fact that as yet it is only serving one-third of the entire population of school age. To meet this problem, I suggested the passing of a compulsory attendance law; the raising of taxes for the support of schools; more adequate agencies for the training of teachers; and the employment of more teachers of good training and of high scholastic attainment and at an increased salary.

The question now that will present itself is just how far has the Philippine public school system progressed in comparison with the progress of the public school system in the other countries. For this purpose, I have here prepared a table

(No. 14) based on Ayres' "Index Number for State School Systems",<sup>1</sup> which shows the degree of progress of the Philippine

1. Ayres, Leonard An Index Number for State School Systems

1910

Proposed by the Board of Directors of the  
Company for the year ending 1910

Resolved that the following

amounts be paid to the

dividend for the year

ending 1910 to the

shareholders of record

on the 15th day of

December 1910 at

the rate of 10%

on the amount of the

shareholders' interest

in the company for the

year ending 1910

and that the same be

paid to the shareholders

of record on the 15th

day of December 1910

at the rate of 10%

on the amount of the

shareholders' interest

in the company for the

school system when compared with the State school system in the United States, and with the public school system of Porto Rico.

The Philippine public school system was organized and patterned on the county system of the several states of the United States, and for this reason, the comparison is feasible, and justifiable. There is one great difficulty, however, that should be solved before the comparison could be made. This is the problem of the different value between the United States and the Philippine currency. A Philippine peso is worth only fifty cents in United States money, and therefore, if the Philippine money is reduced to the actual money value of the United States money, it would result in a very low index for the Philippine school system.

This seems to me not fair to the Philippine public school system, because we are measuring here the school system in terms of the effort that is behind each school system. And inasmuch as the Philippine peso would buy as much in the Philippines as a United States dollar would buy in the United States, as the comparative cost of the commodities in both countries indicates.

2. Bureau of Commerce and Industry, Statistical Bull. p. 214-5

For this reason I therefore decided to compare the index numbers of the school system of both countries and with Porto Rico, without reducing the Philippine peso into its actual money value in terms of the United States dollar.

The items which Ayres used in making his index number of the state school system are ten in number, and they are as



follows: <sup>2</sup>

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 2. Ayres, Leonard Index Number for State School System  
 pp. 15-19  
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- 1) The per cent of school population attending school daily. This is entered in the index in per cent and it is obtained by dividing the total average daily attendance by the number of children of school age.
- 2) Average days attended by each child of school age. This is also entered in per cent. It is one-half of the number found by dividing the aggregate days of attendance by the number of children of school age.
- 3) Average number of days school were kept open. This is entered as one-half of the actual number of days that the school is kept open during the entire school year.
- 4) Per cent that high school attendance was of total attendance. This is entered as three times the percentage that the high school pupils are of all pupils attending.
- 5) Per cent that boys were of girls in the schools or vice versa. It depends upon which of the two sexes has a majority in the high school enrollment. It is obtained by dividing the lesser number by the larger number.
- 6) Average annual expenditure per child attending. Thus in preparing the index for the Philippine schools this is entered in pesos and it is the result of dividing the total annual expenditures for school purposes by the average daily at-

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tendance.

7) Average annual expenditure per child of school age. This is also entered in pesos and it is obtained by dividing the total annual expenditure by the number of children of school age.

8) Average annual expenditure per teacher employed. This is entered also in pesos, and it is obtained by dividing the total annual expenses by the total number of teachers employed and by 24. The result thus obtained is equal to one-half of the monthly expenditure per teacher.

9) Expenditure per pupil for purposes other than teachers' salaries. This is entered in pesos and it is obtained by dividing the total expenses less the amount paid for teachers' salaries, by the average daily attendance.

10) Expenditure per teacher for salaries. This is also entered in pesos and it is obtained by dividing total expenditures for teachers' salaries by the number of teachers employed, and by 12, thus giving the result as the average monthly salary per teacher.

This scheme is claimed to be a well established statistical device for measuring changes in wholesale and retail prices and the rate of wages over a long period of time.<sup>3</sup>

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3. Ibid. p. 12  
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Ayres selected these ten sets of educational data because they are more or less fair measures of efficiency of any school

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system, and because each of them can be readily stated in percentage terms. Increase in them means improved educational conditions and decrease means poor conditions.

Working on the basis of this scheme, therefore, I obtained the following result as shown in the following table.

We will note from this table and from graph IX following that the annual index of the Philippine public school system is showing progress. It is important to note, however, that there has been irregularity in the progress of the school system in the previous years. For instance, in the school year 1911 the index number of the school system was 26.38. In 1912 this had increased to 29.53 and then it decreases again to 27.37 in 1916. From this year on the annual index of the Philippine school system has reached to 36.75 in 1920. This is a point which is worth consideration. The Philippine public school system has progressed, but the progress has not been regular from year to year. But this irregularity, however, is due to the various factors which have already been discussed elsewhere.

For the purpose of comparison, and to find out just where the Philippine public school system stands when it is compared with the public school system of Porto Rico, I have in table XV thrown together the components and index numbers of both the Philippine public school system and the public school system of Porto Rico.

We will notice from this table that the Philippines lead in all the ten items except in item five which is the

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TABLE XIV  
 Components and Index Number of the Philippine School System 1911 to 1920

Year	In Percentages										In Pesos					Average
	1	2	3	4	5	6	7	8	9	10	Index No.					
1911	27.95	24.46	87.50	2.72	17.49	18.12	5.06	30.09	14.66	35.84	26.38					
1912	25.85	24.62	87.50	3.16	17.86	20.50	5.30	45.28	20.96	44.28	29.53					
1913	27.06	23.67	87.50	3.88	18.57	17.29	4.66	40.78	16.30	43.13	28.28					
1914	28.70	25.11	87.50	4.32	19.21	16.95	4.87	34.06	14.87	38.25	27.38					
1915	27.89	24.40	87.50	4.34	19.33	17.85	4.93	33.60	14.88	39.20	27.40					
1916	29.75	26.03	87.50	5.00	21.15	16.80	5.00	30.19	13.87	35.48	27.07					
1917	30.82	26.97	87.50	5.62	24.06	18.67	5.75	32.78	17.69	34.53	28.43					
1918	31.25	27.34	87.50	7.12	28.34	22.05	6.89	36.50	17.05	44.82	30.88					
1919	30.08	26.32	87.50	8.09	33.55	31.04	9.34	44.99	29.71	46.92	34.75					
1920	37.06	32.43	87.50	6.92	37.48	28.76	10.65	42.16	28.82	52.44	36.75					

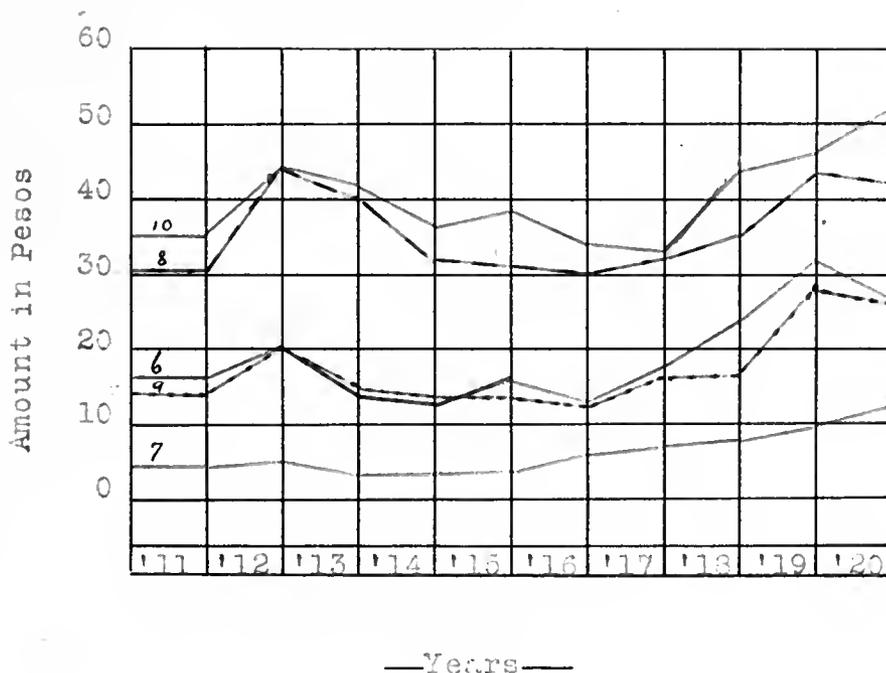
Note: Numbers 1 to 10 inclusive correspond to the ten items discussed above

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## GRAPH IX

Graphical Representation of the Average Annual Expenditure per Child Attending School Daily; per Child of School Age; per Teacher Employed; Expenditure per Pupil for Purposes Other Than Teachers' Salaries, and per Pupil for Salaries.



- Note: (6) Average annual expenditure per child attending daily.  
 (7) Average annual expenditure per child of school age.  
 (8) Average annual expenditure per teacher employed.  
 (9) Expenditure per pupil for purposes other than teachers' salaries.  
 (10) Expenditure per teacher for salaries.  
 (See table XIV).



### Graphical Representation of the Progress of the Philippine School System in Terms of the Annual Index.

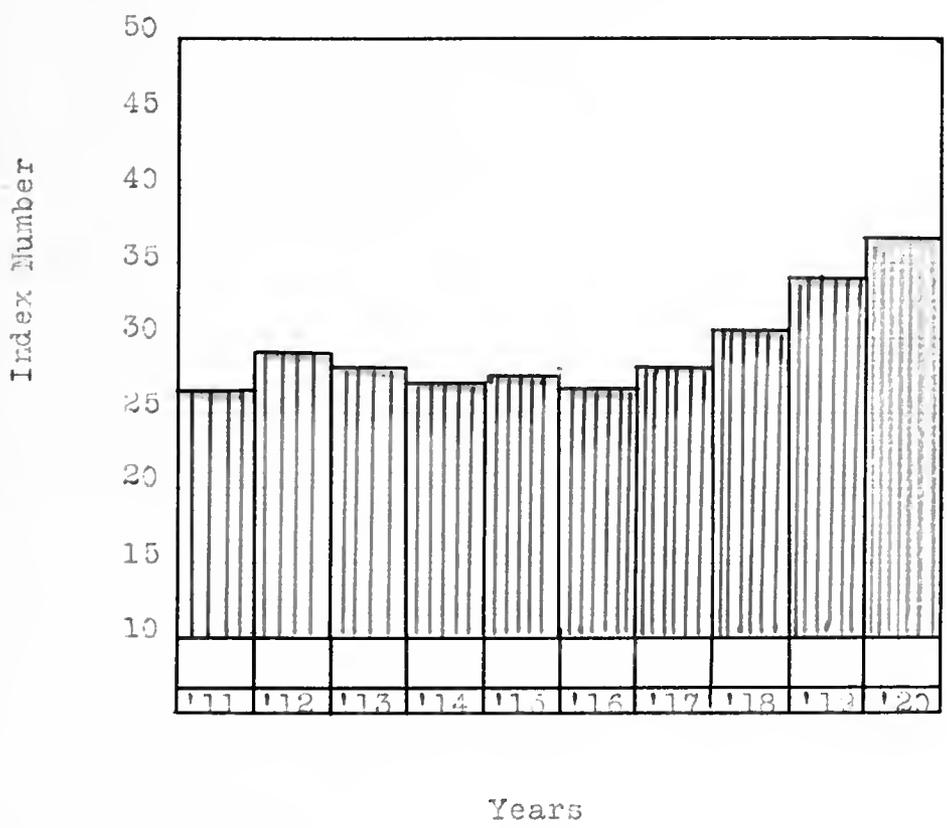




TABLE XV

Components and Index Numbers of the Philippine Public Schools and the Public School System of Porto Rico for the Year 1918.

Items	P. R. <sup>1</sup>	P. I.
1. Per cent of school population attending school daily	24.74	30.08
2. Average days attended by each child of school age	21.65	26.32
3. Average number of days schools were kept open	87.50	87.50
4. Per cent that high school attendance was of total attendance	7.25	8.09
5. Per cent that boys were of girls in high schools	95.22	33.55
6. Average expenditure per child in average attendance	21.85	31.04
7. Average expenditure per child of school age	5.41	9.34
8. Average expenditure per teacher employed	35.24	44.99
9. Expenditure per pupil for purposes other than teachers' salaries	18.71	29.21
10. Expenditure per teacher employed for salaries	40.31	44.28
The Index Number (1918)	35.75	34.44

1. Data for Porto Rico is taken from Leonard P. Ayres' "An Index Number for State School Systems" p. 37

percentage that boys were of girls in the high schools. In part VIII of chapter II, I stated that the per capita wealth of the Philippines in 1918 was 72.95 pesos while the per capita wealth of Porto Rico was \$200, and the per capita wealth of the poorest state in the United States was about \$800<sup>4</sup> and yet in

4. Ayres, L.P. "An Index Number for State School Systems" p. 39

terms of effort behind the public schools, the Philippines lead



seven of the states in the United States and are next to Porto Rico, as the following table may indicate.

TABLE XVI

Index Numbers of States Including Porto Rico and the Philip-  
pines in 1918.

Montana	76	Kansas	55
California	71	Canal Zone	55
Arizona	66	South Dakota	55
New Jersey	66	New Hampshire	54
District of Columbia	64	New Mexico	53
Washington	64	Vermont	52
Iowa	62	Wisconsin	51
Utah	61	Missouri	50
Massachusetts	61	Maine	47
Michigan	60	Oklahoma	44
Connecticut	60	Maryland	43
Ohio	60	Delaware	42
New York	59	Texas	41
Colorado	59	Florida	38
North Dakota	59	West Virginia	38
Nevada	59	Virginia	35
Indiana	59	Tennessee	35
Idaho	59	Kentucky	35
Minnesota	58	Porto Rico	35
Oregon	58	<u>Philippines</u>	<u>34</u>
Pennsylvania	58	Louisiana	34
Nebraska	57	Georgia	33
Hawaii	57	North Carolina	31
Illinois	57	Alabama	31
Wyoming	57	Arkansas	30
Rhode Island	56	Mississippi	30
		South Carolina	29

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 Note: Data used in this table except that of the Philippines  
 was taken from Leonard P. Ayres' Index Number p. 53  
 -----

If the Philippine peso is reduced into its money value in terms of American currency, the index number for the Philippine public school system is reduced from 34.44 to 26.50, and



this would place the Philippines three points below the state of South Carolina which had the lowest index number in 1918. As I have shown before, however, to reduce the Philippine peso to the United States dollar is not fair to the Philippines when it comes to measuring the relative effort that is put by each of the countries behind their respective school systems. For this reason therefore, 34.44 is the actual index number for the Philippine public schools.

In the light of all these facts one can fairly assume that the Philippine public school is not behind when it is compared with the state public school systems in the United States, and that the government has done and is doing its best to support the system. The public school system has just begun its work, and so far it has reached only about one-third of the children of school age. It has already done wonderful and commendable service to the Filipino masses. But it needs however, well trained and adequately paid men in the service, and when this is realized, one can only speculate as to the future service of this most important institution in the making of the Filipino people.

the world is a very small place  
and it is very easy to find  
a friend in need. I have  
found many friends in my  
life and I am grateful for  
them. I hope you will find  
many friends in your life  
too. I am sure you will.

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APPENDIX

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