UNIT COST OF PHYSICAL EDUCATION EXCLUSIVE OF ATHLETICS IN THE WOODROW WILSON HIGH SCHOOL AND LONG BEACH JUNIOR COLLEGE

1930-1931

by

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Melvin Frank Griffin

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Chapter Page

CHAPTER I

THE PROBLEM

Introduction. Since 1826 when Physical Education was introduced into the American colleges it has been a much abused part of every school curriculum.[1] The World War opened the eyes of the American people, making them realize that Physical Education was of far more significance than any one had been prone to admit up to this time.

The majority of people think of athletics when Physical Education is mentioned. One of the main reasons for this is, that most schools pick a coach for athletics rather than a teacher of Physical Education.

Our colleges have been slow in offering degrees in the field of Physical Ecucation. Health has been designated in the seven Cardinal principles as the first objective in education. Perhaps no subject has received greater attention and approbation in general education than this first Cardinal principle, yet in many places this subject which we put first in theory we neglect in practice.[2]

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[1] Leonard & McKinzie, History of Physical Education, Lea and Febiger, 1928

[2] Wood, T. D. and Brownell, C. L., Source Book in Health and Physical Education, Macmillan, 1925

However, in many states and cities health and Physical Education has made most rapid progress. At present thirty-five states have compulsory Physical Education laws; twenty-nine states have state programs with state syllabi and nineteen have state departments with staff, program, and budget. No other subject in the curriculum has had such wide spread legislative recognition.[1]

The growth in the employment of full time Physical Education instructors is impressive. It is estimated that about twenty thousand are now employed in the public schools of the country.[2] About one hundred and seventy-five universities, colleges, normal schools, and private schools are graduating approximately three thousand students in this field of education each year. Four year graduates, with degrees, are now becoming the rule. In brief, the personnel is growing and becoming better trained, both in technic and academic background. Better and finer indoor and outdoor facilities are being provided; more and more time is being given to this subject so that proper results may be obtained; recognition and encouragement are being given to

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[1]N.E.A. Journal, Vol. 18 page 57, Feb. 1929, J. E. Rogers

[2]N.E.A. Journal,Vol. 18 page 57, Feb. 1929, J. E. Rogers

this subject in promotion and graduation so that it will be worth something in the minds of the teachers and the students; and finally a better type of teacher is being trained to develop a program that will merit these educational standards and receive the approval of the general educator.[1]

Definition. Physical Education is education by means of physical activities. It is concerned with the big-muscle activities and related factors which influence the development of the child and the physical and social efficiency of the adult.[2]

The aims of Physical Education. When the aims of Physical Education are referred to, there is in mind not alone an improvement of the physical being, a muscular development and a gain in organic vigor, but there is in addition a mental, moral, and social education by means of physical tools. It is customary or has been in the past, to think of Physical Education too much in terms of "perspiration and gymnastic contests," muscle building and spectacular exhibitions. The new Physical Education is seeking to do the common

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[1] N.E.A. Journal, vol. 18 page 57, Feb. 1929, J. E. Rogers

[2] Neilson, N. P. and Van Hagen, W., Manual of Physical Education Activities for Elementary Schools, California State Printing Office, Sacramento, 1929.

place--to develop the masses, to raise the standards of the masses, morally and mentally as well as physically, and to make of them social assets.

The aims are (1) health, (2) developing strong muscles and strong well-poised bodies, mechanically correct and able to carry their loads easily, (3) helping make boys and girls organically sound, (4) developing good neuromuscular control, (5) setting living standards, establishing ideals, make every boy and girl a finer, bigger, broader man and woman, and (6) teaching the boys and girls a more worthy use of their leisure time.[1]

General Objectives set up by Neilson and Van Hagen cover the Physical Education field very well.[2]

1. The development of organic vitality
2. The development of many specific neuromuscular skills
3. The development of proper ideals and attitudes toward physical activities, and

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[1] Wayman, Agnes R., Education Through Physical Education, Lea and Febiger, 1928

[2] Neilson, N. P., and Van Hagen, W., Manual of Physical Education Activities for Elementary Schools, page 18, California State Printing Office, Sacramento, 1929.

4. The establishment of desirable habits of conduct.

I would like also to submit here the professional objectives set up by the Health and Physical Education Association.

1. A medical examination for every school child.
2. Health habits that endure.
3. A class period in Physical Education each day.
4. A gymnasium and playground for every school.
5. The teacher fully trained and accredited.
6. The coach a member of the faculty.
7. A graded and scientific curriculum.
8. Standardized Physical Efficiency tests.
9. Positive credit for Physical Education work.
10. Education for leisure.
11. An Intra-Mural program for after school hours.
12. A varsity program that stresses sportsmanship and ethical conduct.
13. Opportunity for scouting and campcraft.
14. Equipped and supervised summer playgrounds.
15. Provisions for wholesome adult recreation.

Physical Education seems to have at present four big needs.[1]

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[1] Wayman, Agnes R., Education Through Physical Education, Lea and Febiger, 1928

(1) A more intelligent program of activities, more intelligently administered with proper emphasis upon preventative and remedial measures.

(2) A more educational attitude toward physical directors and physical educators, and educators in general.

(3) A keener realization on the part of the public, governments, and institutions of real value and needs of Physical Education, of the gradually increasing necessity for more Physical Education and recreation properly controlled and administered for the masses.

(4) A more active promotion of Physical Education and recreational program--more advertising (of a constructive nature), a greater endeavor to "sell" Physical Education.

The success of Physical Education in the future will depend upon the application of the same psychological, philosophical, and sociological standards which regulate the program for general education.[1]

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[1] Wood, T. D., and Brownell, C. L., Source Book in Health and Physical Education, Macmillan, 1925

Physical Education has been compulsory in the California schools since the year 1917.[2] Since there has been no study of what Physical Education actually costs each school board, I chose this study thinking it might be of some value to school administrators and Physical Education instructors.

It is an obvious fact that the cost of education on the secondary school level is amounting entirely too high and that it isn't always an easy task to determine the relative value of academic offering without relative costs. The introduction of a large number of activities into the Physical Education program has been responsible for the increased total cost of Physical Education.

This study will show that the introduction of some of these activities has been made without due consideration of the relative cost of the activities. It, therefore, becomes a problem of education to determine the relative contributions that each activity makes to the physical well-being of the child and on this basis determine the emphasis that

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[2] Hetherington, C. W., School Programing in Physical Education, World Book Company, 1922

should be placed on each activity.

The study of costs has also been stimulated by the general requirements of Boards of Education to raise the scholastic standards in Physical Education courses and to raise the requirements for certification of teachers.

New curricula of Physical Education have been created by means of which new activities have been introduced and by means of which new techniques have been demanded for the diagnosis of physical status of children and for the prescription of remedial measures to correct postural defects; to this end, the Orthopedic department has been added and this department has increased the cost of Physical Education.

Possibly one of the most outstanding trends in the improvement of the conditions in Physical Education have been in the nature of methods of programming children in Physical Education at the time of registration. Whereas now is being done by a more scientific method. Children are scheduled for certain classes in which they can best adapt themselves to the program offered, and this is made on

the basis of the child's development and experience.

More scientific means must be adopted by departments of Physical Education for the purpose of discovering and correcting Physical defects in children, and this can only be done by raising the standard of teacher certification, of courses of study material, and improving the teaching technique in departments of Physical Education, to carry out corrective work.

Statement of Problems. The problems under consideration in this study on the costs for a student to take Physical Education in the Woodrow Wilson High School and the Long Beach Junior College falls under the following major consideration:

1. The determination of the amount of money a student spends for his Physical Education uniform.
2. The determination of the cost of instructional supplies for each student.
3. The determination of instructional costs for each individual student.
4. The determination of various miscellaneous investments in the Physical Education program.

Purpose of this study. The purpose of this study is to determine the relative costs to individual students in the Department of Physical Education in Woodrow Wilson High School and the Long Beach Junior College, and the actual costs involved in the education of a student in Physical Education to the School Board of the Long Beach City Schools.

The period under consideration will cover the school year of 1930-1931.

CHAPTER II

METHOD OF PROCEDURE

Schools Involved. The data for this study were taken from two institutions on the secondary school level, namely: The Woodrow Wilson High School and the Long Beach Junior College.

Source of Data. The average enrollment of the Woodrow Wilson High School is 1339 students and the average enrollment of the Long Beach Junior College is 957. The high school is a three year high school accredited by the University of California and the Long Beach Junior College is also accredited by the University of California.

Beforesecuring the data for this study, the consent of the Principal of both institutions was obtained, including the Dean of the Junior College, and the members of the faculty in the department of Physical Education in both institutions were interviewed for the purpose of securing their cooperation in developing an adequate questionnaire to be submitted to the students for the necessary information. Students considered in this study were selected from the list in regular attendance and who were not directly affiliated with athletic organizations. The inform-

ation with regard to costs of materials, including instructional supplies, teachers' salaries, and the salaries for the building employees, were obtained from the records of the Principal's office and the office of the Director of Business Administration.

Two forms of questionnaires were made to be submitted to students for this study.

Form I: Representing the questionnaire submitted to boys in both institutions.

Form II: Representing the questionnaire submitted to girls in both institutions.

Form III: A form which sets forth the criteria for pupils who were not connected with this study.

Form I

(This is the type of questionnaire used for the boys in Woodrow Wilson High School and the boys in the Long Beach Junior College.)

Name_____
Sex_____
Classification_____
School_____
Period_____

Please fill in the amount you spent for your Physical Education equipment as listed below.

Cost of: Shoes_____( )*
Socks_____( )
Support_____( )
Pants_____( )
Jersey_____( )
Combination Lock_____( )

Please list below any other expenses due to Physical Education.

1_____( )*
2_____( )
3_____( )
4_____( )

*Note - Please put the number of semesters you have used this equipment in the ( ) opposite each article.

Form II

(This is the type of questionnaire used for the girls in the Woodrow Wilson High School and the girls in the Long Beach Junior College.)

Name_____
Sex_____
Classification_____
School_____
Period_____

Please fill in the amount you spent for your Physical Education equipment as listed below.

Cost of: Shoes_____( )*
Socks_____( )
Bloomers_____( )
Middy_____( )
Combination Lock_____( )

Please list below any other expenses due to Physical Education.

1_____( )*
2_____( )
3_____( )
4_____( )

* Note - Please put the number of semesters you have used this equipment in the ( ) opposite each article.

Form III

The following criteria formed the basis for all students not being counted in the Physical Education classes.

Football ----------A*, B*, C*

Basketball ----------A*, B*, C*

Track ----------A*, B*

Baseball ----------A*

Tennis ----------A*

Golf ----------A*

Withdrew

Dropped

Post Graduates

Adults

Specials

Doctors' excuses

Defective Questionnaires

Many were in school one semester but not the second.

*(A) Varsity Squad

*(B) Middle Weight Squad

*(C) Light Weight Squad

Method of treatment of data. Four distinct classifications of pupils were used in this study. Two on the basis of sex, and two belonging either to the High School or the Junior College. The material under consideration in this study involved four major activities: golf, tennis, sports, and rhythms in Junior College, and in High School, Physical Education, only, was considered.

The major activities were further analyzed into more specific elements, which formed the basis for the study of costs, such as: shoes, socks, supports, pants, jerseys, combination locks, etc.

The purpose of each table is to show the total cost or average cost of material for each major activity with regard to each specific element, so that the reader could ascertain the average cost for boys and girls in each item and for each class in the Junior College and in the High School.

The table data is given in actual amounts rather than in per cent.

CHAPTER III

DETERMINATION OF UNIT COST OF INSTRUCTION PER PUPIL, TO THE LONG BEACH SCHOOL BOARD, AND TO EACH INDIVIDUAL

Table 1 shows the average yearly cost of shoes per pupil, for Freshmen and Sophomore boys and girls, in the Long Beach Junior College for each of the four major activities: golf, tennis, sports, and rhythms for the year 1930-1931. It is obvious that the cost of shoes in the major activity, golf, for Freshmen boys is the lowest and the Sophomore girls is the highest, being exactly a dollar difference.

In the matter of tennis, the cost for Freshmen girls is the lowest and the Sophomore boys is the highest, whereas in sports the Freshmen girls and Sophomore girls have lower cost while the Freshmen boys represent higher cost per pupil.

Table 2 shows the average yearly cost of socks per pupil for Freshmen and Sophomore boys and girls in the Long Beach Junior College for each of the four major activities, golf, tennis, sports, and rhythms, for the year 1930-1931. Obviously, the average cost of socks for the major activity, golf, is higher for Sophomore boys than for

Freshmen boys, and the average cost of shoes for tennis seems to be highest for Freshmen girls, and lowest for Sophomore girls. For general sports, the cost is almost the same for both Freshmen and Sophomore boys and girls.

Table Abbreviations

N-Frequency

T.C. - Total Cost

A.C. - Average Cost

TABLE I

Showing the average yearly cost of shoes per pupil for Freshmen and Sophomore boys and girls in the Long Beach Junior College for each of four major activities, Golf, Tennis, Sports and Rhythms, for the year 1930-1931.

		FRESHMEN		SOPHOMORES	
ACTIVITIES		Boys	Girls	Boys	Girls
GOLF	N	25	24	21	19
	T.C.	50.10	65.50	40.62	55.75
	A.C.	2.004	2.733	1.93	2.934
TENNIS	N	15	32	25	43
	T.C.	35.25	32.00	62.50	44.94
	A.C.	2.35	1.00	2.50	1.045
SPORTS	N	106	43	65	17
	T.C.	219.91	41.32	107.63	16.01
	A.C.	2.07	.94	1.65	.94
RHYTHMS	N	None	67	None	58
	T.C.	"	40.60	"	61.45
	A.C.	"	.606	"	1.06

<u>This table should be read as follows</u>: The average pupil cost of shoes for Golf for Freshmen boys is $2.004; for Freshmen girls $2.733; for Sophomore boys $1.93; and Sophomore girls, $2.934.

TABLE 2: Showing the average yearly cost of socks per pupil for Freshmen and Sophomore boys and girls in the Long Beach Junior College, for each of four major activities; Golf, Tennis, Sports, and Rhythm, for the year 1930-1931.

Activities		Freshmen		Sophomores	
		Boys	Girls	Boys	Girls
Golf	N.	25	None	21	None
	T.C.	8.05	None	10.50	None
	A.C.	.32	None	.50	None
Tennis	N.	15	32	25	43
	T.C.	5.10	12.80	8.93	13.49
	A.C.	.34	.40	.357	.315
Sports	N.	106	17	65	43
	T.C.	40.85	5.70	22.82	15.41
	A.C.	.385	.335	.35	.335
Rhythms	N.	None	67	None	58
	T.C.	None	10.05	None	21.05
	A.C.	None	.15	None	.36

Table 3 shows the average yearly cost of pants for Freshmen and Sophomore boys, and bloomers for Freshmen and Sophomore girls in the Long Beach Junior College for each of the four major activities. The average yearly cost of pants for boys seems to be highest for the major activity of tennis, and lowest for golf for Freshmen boys. For Sophomore boys, the lowest cost is assigned to sports, and the highest cost to tennis. For Freshmen girls, the lowest cost for bloomers is found in rhythms, and the highest cost is found in tennis. For Sophomore girls, the lowest cost is for sports, and the highest cost for rhythms.

Table 4 shows the average yearly cost of jerseys for Freshmen and Sophomore boys, and middies for Freshmen and Sophomore girls in the Long Beach Junior College, for each of the four major activities. This table reveals the fact that the lowest net cost for Freshmen boys is found in sports, and the highest in golf. The same applies to Sophomore boys. The lowest cost for middies for Freshmen girls is found in rhythms, and for Sophomore girls, is found in sports. The highest cost of middies for Freshmen girls is in tennis, and for Sophomore girls, in rhythms.

TABLE 3: Showing the average yearly cost of pants for Freshmen and Sophomore boys and bloomers for Freshmen and Sophomore girls in the Long Beach Junior College for each of four major activities; golf, tennis, sports, and rhythms for the year 1930-1931.

Activities		Freshmen		Sophomores	
		Boys	Girls	Boys	Girls
Golf	N.	25	None	21	None
	T.C.	16.95	None	16.20	None
	A.C.	.68	None	.77	None
Tennis	N.	15	32	25	43
	T.C.	24.25	32.00	23.75	44.15
	A.C.	1.62	1.00	.95	1.027
Sports	N.	106	17	65	43
	T.C.	72.61	11.58	40.55	29.58
	A.C.	.685	.688	.623	.688
Rhythms	N.	None	67	None	58
	T.C.	None	36.52	None	64.48
	A.C.	None	.545	None	1.11

TABLE 4: Showing the average yearly cost of Jerseys for Freshmen and Sophomore boys, and middies for Freshmen and Sophomore girls in the Long Beach Junior College for each of four major activities; golf, tennis, sports, and rhythms for the year 1930-1931.

Activities		Freshmen		Sophomores	
		Boys	Girls	Boys	Girls
Golf	N.	25	None	21	None
	T.C.	16.85	None	13.00	None
	A.C.	.695	None	.619	None
Tennis	N.	15	32	25	43
	T.C.	8.90	44.80	17.27	50.15
	A.C.	.59	1.40	.69	1.165
Sports	N.	106	17	65	43
	T.C.	58.66	12.12	35.75	30.53
	A.C.	.553	.71	.55	.71
Rhythms	N.	None	67	None	58
	T.C.	None	34.51	None	67.89
	A.C.	None	.515	None	1.17

Table 5 shows the average yearly cost of combination locks per pupil for Freshmen and Sophomore boys and girls in the Long Beach Junior College for each of the four major activities. There is, apparently, very little difference in the cost of combination locks for Freshmen boys, with the exception of tennis. The reason for this difference in cost is due to the fact that the locks are carried over from the High School into the Junior College.

Another factor which affects the relative cost of locks is one peculiar to the Long Beach School system, within which pupils who have gone through the three levels of education, in which Physical Education was emphasized, have carried their locks through. Among the girls we found that more locks were retained than among the boys, thereby lowering the net cost.

TABLE 5: Showing the average yearly cost of combination locks per pupil for Freshmen and Sophomore boys and girls in the Long Beach Junior College for each of four major activities; golf, tennis, sports, and rhythms for 1930-1931.

Activities		Freshmen		Sophomores	
		Boys	Girls	Boys	Girls
Golf	N.	25	None	21	None
	T.C.	19.70	None	18.30	None
	A.C.	.798	None	.87	None
Tennis	N.	15	32	25	43
	T.C.	13.15	26.56	12.60	31.85
	A.C.	.88	.83	.504	.74
Sports	N.	106	17	65	43
	T.C.	80.45	8.36	48.36	20.07
	A.C.	.759	.49	.74	.49
Rhythms	N.	None	67	None	58
	T.C.	None	30.16	None	49.10
	A.C.	None	.45	None	.846

Table 6 shows the average yearly cost of other expenses for Freshmen and Sophomore boys and girls in the Long Beach Junior College, incurred by Physical Education in the four major activities. Such other expenses as might be classified under golf fees, repairs on tennis rackets, additional rhythms costumes, and sport sweat shirts, are considered by this table, and show a decided variation in average cost for each major activity. Some of the reasons for the tremendous variation in average cost, such as was found in golf and sports for both boys and girls, might be assigned to the fact that girls' golf classes have to pay more fees than the boys,since they receive individual instruction for a longer period.

In the case of tennis, the girls were furnished with tennis rackets for Physical Education class work, while the boys furnished their own. Another factor affecting the cost of tennis was the repair on rackets, and the purchase of tennis balls.

With regard to the rhythms classes, they are required to provide uniforms especially designed for rhythm classes, which was responsible for the increased cost.

In the matter of sports for girls, as contrasted with boys, the cost was increased by such devices as arm bands for squad leaders, and ice cream feeds, which were indulged in frequently.

Table 7 shows the average yearly cost of supports per pupil for Freshmen and Sophomore boys in the Long Beach Junior College for each of the four major activities. This table shows obviously little difference between the average cost per pupil for golf and tennis, but a considerable difference in average cost for sports.

TABLE 6: Showing the average yearly cost of other expenses (incurred by Physical Education) per pupil for Freshmen and Sophomore boys and girls in the Long Beach Junior College for each of four major activities; golf, tennis, sports, and rhythms for the year 1930-1931.

Activities		Freshmen		Sophomores	
		Boys	Girls	Boys	Girls
*Golf	N.	25	24	21	19
	T.C.	200	396	168	313.50
	A.C.	8	16.50	8	16.50
*Tennis	N.	15	32	25	43
	T.C.	68.50	0	119	1.25
	A.C.	4.57	0	4.76	.029
*Sports	N.	106	17	65	43
	T.C.	17	13.83	30	0
	A.C.	.16	.81	.46	0
*Rhythms	N.	None	67	None	58
	T.C.	None	166.60	None	8.40
	A.C.	None	2.486	None	.144

*Golf fees
*Stringing tennis rackets, etc.
*Rhythm Costumes, etc.
*Sports sweat shirts

TABLE 7: Showing the average yearly cost of supports per pupil for Freshmen and Sophomore boys in the Long Beach Junior College for each of the three major activities; golf, tennis, and sports for the year 1930-1931.

Activities		Freshmen	Sophomore
		Boys	Boys
Golf	N.	25	21
	T.C.	13.45	11.10
	A.C.	.538	.52
Tennis	N.	15	25
	T.C.	7.40	12.14
	A.C.	.49	.4857
Sports	N.	106	65
	T.C.	64.90	36.57
	A.C.	.612	.56

Table 8 shows the individual cost of each girl in Woodrow Wilson High School and Long Beach Junior College, enrolled in the orthopedic classes for 1930-1931.

The orthopedic classes for girls required special costumes, which were not considered under the other classification. These costumes, including kimonos and swimming suits, are purchased by students, but the material and quality of these costumes are recommended by the Physical Education department, and are offered at a uniform price, which undoubtedly accounts for the uniform cost of each student in orthopedic classes.

TABLE 8: Showing the individual cost for each Woodrow Wilson High School girl and each Long Beach Junior College girl in Orthopedic Class for the year 1930-1931.

Article		Woodrow Wilson High School Girls	Long Beach Junior College Girls
Kimono	N.	31	17
	T.C.	31.00	17.00
	A.C.	1.00	1.00
Swimming Suits	N.	84	41
	T.C.	294.00	143.50
	A.C.	3.50	3.50

Table 9 shows the average yearly cost of shoes, socks, support, pants, jerseys, locks, and other expenses incurred by per pupil by Physical Education Department for Sophomore, Junior and Senior boys in the Woodrow Wilson High School for the year 1930-1931. The table shows obvious variation in the average cost for shoes by boys of each of the three years and the gradual increase in cost of shoes for each successive year. The rate of increase in cost seems to be less pronounced in the matter of jerseys and combination locks than in the other items.

TABLE 9: Showing the average yearly cost of shoes, socks, support, pants, jersey, locks and other expenses incurred by Physical Education per pupil for Sophomore, Junior and Senior boys in the Woodrow Wilson High School for the year 1930-1931.

Boys

Equipment		Sophomore	Junior	Senior
Shoes	N.	128	93	33
	T.C.	169.65	153.09	78.70
	A.C.	1.325	1.646	2.384
Socks	N.	128	93	33
	T.C.	29.33	31.37	17.00
	A.C.	.229	.336	.52
Support	N.	128	93	33
	T.C.	62.00	60.57	36.25
	A.C.	.484	.651	1.10
Pants	N.	128	93	33
	T.C.	83.45	69.84	29.95
	A.C.	.651	.75	.907
Combination Lock	N.	128	93	33
	T.C.	93.30	79.77	28.50
	A.C.	.728	.857	.863
Other Expenses	N.	128	93	33
	T.C.	13.80	7.44	1.65
	A.C.	.107	.08	.05

Table 10 shows the average yearly cost of shoes, socks, bloomers, middies, locks, and other expenses per pupil incurred by Sophomore, Junior, and Senior girls in high school for the year 1930-1931. The average cost of shoes for girls is considerably lower than that for boys, while the average cost of socks is nearly twice as high for Sophomore and Junior boys than the girls, and a trifle higher for the Senior girls. The cost of middies for girls as compared with jerseys for boys is three times that of the boys for the Sophomore and Junior, and nearly the same for the Senior. In the matter of other expenses, the average is considerably greater for Junior and Senior girls than for Junior and Senior boys, and nearly the same for Senior girls and boys.

TABLE 10: Showing the average yearly cost of shoes, socks, bloomers, middy, lock, and other expenses incurred by Physical Education (per pupil) by Sophomore, Junior, and Senior girls in the Woodrow Wilson High School for the year 1930-1931.

		Girls		
Equipment		Sophomore	Junior	Senior
Shoes	N.	174	267	130
	T.C.	188.04	313.10	152.06
	A.C.	1.086	1.17	1.70
Socks	N.	174	267	130
	T.C.	104.01	175.72	73.62
	A.C.	.597	.66	.566
Bloomers	N.	174	267	130
	T.C.	213.85	318.54	135.13
	A.C.	1.229	1.193	1.04
Middy	N.	174	267	130
	T.C.	291.79	448.29	149.82
	A.C.	1.676	1.68	1.152
Com. Lock	N.	174	267	130
	T.C.	127.66	177.50	67.05
	A.C.	.733	.67	.515
Other Expenses	N.	174	267	130
	T.C.	21.52	88.59	32.51
	A.C.	.123	.331	.25

Table 11: Shows the average cost of Physical Education for an individual high school boy for the year 1930-1931 in Woodrow Wilson High School, and the total cost for each boy, and table 12, shows the average cost for an individual girl in the same high school and same year. In table 12, we note a marked variation in average cost. The average cost for shoes per pupil for boys is about 40% higher than for girls, while the cost for socks is 100% higher than for girls, and the cost of middies for girls is about 100% higher than the cost of jerseys for boys. The miscellaneous cost item for boys is very much lower than that for girls, making the total cost of Physical Education for an individual girl in high school higher by 18¢ than that for boys.

TABLE 11: Showing the average cost of Physical Education for an individual high school boy for the year 1930-1931 in Woodrow Wilson High School.

Shoes	$1.783
Socks	.363
Support	.743
Pants	.770
Jersey	.716
Com. Lock	.816
Other Expenses	.079
Total	$ 5.27

TABLE 12: Showing the average cost of Physical Education for an individual high school girl for the year 1930-1931 in the Woodrow Wilson High School.

Shoes	$1.317
Socks	.610
Bloomers	1.153
Middy	1.503
Com. Lock	.640
Other Expenses	.233
Total	$5.456

Table 13 and 14: Show the average cost of Physical Education for boys and girls for 1930-1931 in Long Beach Junior College. Here, again, we have a marked variation in average cost for most items. In the matter of shoes, the cost for an individual boy is considerably higher than that for girls; whereas, in the matter of socks, the cost is nearly the same, and in the matter of other miscellaneous expenses, the average cost per boy is considerably lower than that for each girl. But the total cost for an individual boy in the Junior College for one year is about 16% higher than the total cost for an individual girl in Junior College.

TABLE 13: Showing the average cost of Physical Education for an individual boy for the year 1930-1931 in the Long Beach Junior College.

Shoes	$2.083
Socks	.376
Support	.535
Pants	.888
Jersey	.616
Com. Lock	.758
Other Expenses	.095
Total	$5.35

TABLE 14: Showing the average cost of Physical Education for an individual girl for the year 1930-1931 in the Long Beach Junior College.

Shoes	$1.407
Socks	.318
Bloomers	.845
Middy	.946
Com. Lock	.641
Other Expenses	.327
Total	$4.48

Table 15: Shows the average yearly cost for students in the Woodrow Wilson High School and the Long Beach Junior College for each article used by them and for each fee paid by them in Physical Education class for 1930-1931.

Table 16: Shows the enrollment for the ten school months for 1930-1931 for Woodrow Wilson High School for both boys and girls.

Table 17: Shows the enrollment for the ten school months for 1930-1931 for both boys and girls. Both tables show a slight increase in enrollment in February which is due to the fact that it is the beginning of a new semester.

TABLE 15: Shows the average yearly cost for Woodrow Wilson and Long Beach Junior College students for each article used by them and each fee paid by them in Physical Education classes for 1930-1931.

Article	School	Sex	Average Cost
Balls and Rackets	L.B.J.C.	Boys	$4.665
Rhythm Costume	L.B.J.C.	Girls	2.4866
Kimona	H.S.&J.C.	Girls	1.00
Swimming Suits	H.S.&J.C.	Girls	3.50
Shoes	W.W.H.S.	Boys	1.783
Shoes	W.W.H.S.	Girls	1.317
Shoes	L.B.J.C.	Boys	2.083
Shoes	L.B.J.C.	Girls	1.407
Socks	W.W.H.S.	Boys	.363
Socks	W.W.H.S.	Girls	.61
Socks	L.B.J.C.	Boys	.3766
Socks	L.B.J.C.	Girls	.318
Support	W.W.H.S.	Boys	.743
Support	L.B.J.C.	Boys	.535
Jersey	W.W.H.S.	Boys	.716
Jersey	L.B.J.C.	Boys	.616
Middy	W.W.H.S.	Girls	1.503
Middy	L.B.J.C.	Girls	.946
Bloomers	W.W.H.S.	Girls	1.153
Bloomers	L.B.J.C.	Girls	.845
Pants	W.W.H.S.	Boys	.77
Pants	L.B.J.C.	Boys	.888
Combination Locks	W.W.H.S.	Boys	.816
Combination Locks	W.W.H.S.	Girls	.64
Combination Locks	L.B.J.C.	Boys	.758
Combination Locks	L.B.J.C.	Girls	.641
Golf Fees	L.B.J.C.	Girls	16.50
Golf Fees	L.B.J.C.	Boys	8.00
Miscellaneous	W.W.H.S.	Girls	.233
Miscellaneous	W.W.H.S.	Boys	.079
Miscellaneous	L.B.J.C.	Girls	.327
Miscellaneous	L.B.J.C.	Boys	.095

TABLE 16: Showing the enrollment for the ten school months of 1930-1931 for Woodrow Wilson High School, Boys and Girls.

Month	No. Enrolled Each Month		Total Enrollment of Girls and Boys for Each Month
	Boys	Girls	
September	657	714	1371
October	625	676	1301
November	627	679	1306
December	624	682	1306
January	616	679	1295
February	685	720	1405
March	668	722	1390
April	645	701	1346
May	642	697	1339
June	641	690	1331
Total Average Enrollment for ten months			1339

Note: The cause of the increase in enrollment in February is the beginning of a new semester. In order to get the Total Average Enrollment for the ten school months, I took the number enrolled for each month and added them together and divided by ten.

TABLE 17: Showing the enrollment for the ten school months of 1930-1931 for the Long Beach Junior College boys and girls.

Month	No. Enrolled Each Month		Total Enrollment of Boys and Girls.
	Boys	Girls	
September	548	483	1031
October	529	462	991
November	513	452	965
December	506	430	936
January	505	425	930
February	545	422	967
March	535	425	960
April	528	411	939
May	521	408	929
June	520	402	922
Total Average Enrollment for the Ten Months			957

Note: The cause of the increase in enrollment in February is the beginning of a new semester. In order to get the Total Average Enrollment for the ten school months, I took the number and added them together and divided by ten.

It was advisable to have only one total for each of the boys' and girls' departments in first aid, orthopedic, health supplies, instructional supplies, towel laundering and janitorial supplies, because there was such an overlapping in each department.

Table 18 gives the cost of first aid, orthopedic and health supplies, for both boys and girls in the high school and Junior College, as well as instructional supplies, laundry and janitorial supplies for both schools.

Table 19 gives the salaries of all the teachers and building employees involved in giving Physical Education to the students of the Woodrow Wilson High School and the Long Beach Junior College.

As shown in table 20 we find by taking the total enrollment of the High School and Junior College, which is 2296 and dividing the total cost ($336.85) of first aid, orthopedic and health supplies, it was found that the average cost per pupil for all this service for one year was .145.

By taking the total number of girls enrolled (1128) in both schools and dividing this number into the total cost ($224.03) of first

aid, orthopedic and health supplies it was found the average cost was .198.

By taking the total number of boys enrolled (1168) in both schools and dividing this number into the total cost ($112.82) of first aid, orthopedic, and health supplies it was found the average cost was .097.

Table 21 shows the average cost of instructional supplies for each student in both schools for a year.

It is quite obvious that the average cost of instructional supplies for girls in both institutions is exceptionally low, while for boys it is nearly three times as large.

Table I8: Showing the total cost of all expenditures, other than salaries, involved in giving Physical Education to the students of Woodrow Wilson High School and Long Beach Junior College for the year 1930-1931.

School and Department	Materials	Cost
L.B.J.C.) W.W.H.S.) Girls	First Aid Orthopedic and Health Supplies	$ 224.03
L.B.J.C.) W.W.H.S.) Boys	"	112.82
L.B.J.C.) W.W.H.S.) Girls	Instructional Supplies, Balls, etc.	225.38
L.B.J.C.) W.W.H.S.) Boys	"	644.11
W.W.H.S.) L.B.J.C.) Boys Laundry Bill	500 towels at ¾¢ each for 185 school days	639.75
W.W.H.S.) L.B.J.C.) Girls	558 towels at ¾¢ each for 185 school days	774.225
Janitorial Supplies for Girls' Gym	Floor sweep, soap, paper, etc.	100.00
Janitorial Supplies for Boys' Gym	" " "	50.00
Making a total cost of Supplies		$2,770.315

TABLE 19: Showing all the salaries involved in giving Physical Education to the students of Woodrow Wilson High School and Long Beach Junior College for the year 1930-1931.

POSITION	SALARY
Instructor	$ 2,150.00
"	1,250.00
"	2,100.00
"	2,400.00
"	2,400.00
"	2,800.00
"	3,000.00
"	2,600.00
"	2,800.00
"	2,800.00
"	3,000.00
"	3,000.00
Nurse	2,100.00
Physician	181.56
Supervisor	204.96
"	171.54
"	139.68
Custodian	1,740.00
"	1,740.00
"	1,100.00
"	1,100.00
Caretaker	1,920.00
"	1,620.00
"	1,620.00
"	1,620.00
Head Janitor	170.00
Engineer	160.00
Night Watchman	176.00
" "	131.30
TOTAL	$46,195.04

TABLE 20: Showing the A. C. of First Aid Supplies for each individual student in both schools per one year. (The School Year was 185 days in 1930-1931.

		W.W.H.S. and L.B.J.C. Boys and Girls	W.W.H.S. and L.B.J.C. Girls	W.W.H.S. and L.B.J.C. Boys
First Aid,	N.	2296	1128	1168
Orthopedic	T.C.	$336.85	$224.03	$112.82
and Health Supplies	A.C.	.145	.198	.097

TABLE 21: Showing the A. C. of Instructional Supplies for each individual student in both schools per one year. (Which is 185 days in 1930-1931)

		W.W.H.S. and L.B.J.C. Boys and Girls	W.W.H.S. and L.B.J.C. Girls	W.W.H.S. and L.B.J.C. Boys
Instructional Supplies	N.	2296	1128	1168
	T.C.	$869.49	$225.38	$644.11
	A.C.	.352	.198	.551

CHAPTER IV

STUDY OF EXPERIENCE AND PREPARATION OF TEACHERS AND SALARIES OF TEACHERS, SUPERVISORS, PHYSICIANS AND BUILDING EMPLOYEES

Table 22 shows the educational and professional training of eleven teachers connected with the department of Physical Education in the Woodrow Wilson High School and the Long Beach Junior College, their teaching experiences, and their present salary.

Nine of the teachers made definite plans for the career of Physical Education in their undergraduate school work; two of them completed the required work for Physical Education during the graduate years.

All of the teachers considered in this study had four years of high school experience; nine had four years of college and university experience; one of them had two years of college and two years of university experience; and one of them had four years of normal school experience.

The range in time spent in graduate work and summer school for all of the teachers was from ten weeks to two years and the range in teaching experience is from one year to seventeen years with an average of eight and two-tenths years. The salary of these teachers ranges from twenty-one hundred dollars to three thousand dollars.

TABLE 22

Showing the educational and professional training of eleven teachers, their teaching experiences and present salary.

Instructor	Time spent in Educational Training				Time spent in Summer School & Graduate Work	Teachers	
	High School	Normal	College	University		Experience	Present Salary
A	4 yrs.		4 yrs.	3 mo.	36 weeks	10 yrs.	$2800.
B	4 yrs.			4 yrs.	10 weeks	5 yrs.	2400.
C	4 yrs.	4 yrs.			20 weeks	14 yrs.	3000.
D	4 yrs.		4 yrs.		1 yr.	2 yrs.	2150.
E	4 yrs.		2 yrs.	2 yrs.	1 yr.	11 yrs.	3000.
F	4 yrs.			4 yrs.	10 weeks	9 yrs.	2800.
G	4 yrs.			4 yrs.		1 yrs.	2400.
H	4 yrs.			4 yrs.	16 weeks	10 yrs.	2800.
I	4 yrs.		4 yrs.		20 weeks	4 yrs.	2100.
J	4 yrs.			4 yrs.	1 yr.	7 yrs.	2600.
K	4 yrs.			4 yrs.	2 yrs.	17 yrs.	3000.

This table should be read as follows: Teacher A spent 4 yrs. in High School; 4 yrs. in College; 3 mo. in University, 36 weeks in Graduate work and Summer School; had 10 yrs. experience and receives a salary of 2800.

Table 23 shows the number of instructors in Woodrow Wilson High School and the salary paid to each for the year 1930-1931. The maximum salary for high school teachers is three thousand dollars, and the table shows that only one teacher is receiving the maximum salary.

Table 24 shows the number of instructors in the Long Beach Junior College and the salary paid to each instructor during the year 1930-1931. The maximum salary of junior college instructors is three thousand dollars. Two of the teachers are now getting the maximum salary, and two of them are nearing the maximum.

This is the first year in the experience of the Woodrow Wilson High School and the Long Beach Junior College that they have had an opportunity to use a full time physician. The school physician's time is so budgeted that it is divided proportionately among all schools, thus giving to the various schools in the system such help and guidance as has been found essential in proportion to the interests of the school's health program. The Long Beach city

system has provided a staff of supervisors for both boys and girls which assists in the administration and organization of the Physical Education and health program and in the development of such teaching technics as are necessary to improve instruction. The number of supervisors in this department is unusually large as compared with other special departments.

In considering the supervisor's time together with that of the physician as a factor of cost, it was assumed that each physician and supervisor should be credited with one hour per week per school for each one thousand students enrolled. Woodrow Wilson High School, with an average enrollment of 1339 students, was entitled to receive one and one-third hours per week from each supervisor and from the school physician for services rendered. The Long Beach Junior College, with an average enrollment of 957 students, is entitled to one hour per week from each supervisor and from the physician.

To arrive at a cost rate per hour, the total number of hours of service by supervisors and physician per month was determined, and in this manner it was possible to secure the time spent by each supervisor and doctor in each school.

TABLE 23: Showing the number of instructors in Woodrow Wilson High School and the salary paid to each of them for the year 1930-1931.

Name	School	Salary
*Instructor A	W.W.H.S.	$ 1000.
" B	"	1250.
" C	"	2100.
" D	"	2400.
" E	"	2400.
" F	"	2800.
" G	"	3000.
Making a total of		$14,950.

*Instructor A that appears in both Tables No. 23 and 24 is the same instructor but receives part of his salary from the H. S. fund and part from the J. C. fund.

TABLE 24: Showing the number of instructors in Long Beach Junior College and the salary paid to each of the for the year 1930-1931.

Name	School	Salary
*Instructor A	L. B. J. C.	$ 1150.
" B	"	2600.
" C	"	2800.
" D	"	2800.
" E	"	3000.
" F	"	3000.
Making a total of		$15,350.

*Instructor A is the same instructor that appeared in Table 23.

Table 25 shows the time spent, cost per hour, and the total cost for medical attention and supervision for the Woodrow Wilson High School students for the year 1930-1931, figured on the scale of one hour per week for each school and for each one thousand enrolled.

Table 26 shows the time spent, cost per hour, and the total cost for medical attention and supervision for the Long Beach Junior College for the year 1930-1931 based on one hour per week for each one thousand enrolled.

In the matter of incidentals such as heat, light, and water used in both the boys and girls gymnasium for both schools and measured by the same meter with the other school departments, it was impossible to determine the amount of these factors used in Physical Education.

The same thing is true in regard to the lawns, cafeteria, soda fountain, drinking fountains, toilets, and showers for athletics. Since all of these use a tremendous quantity of water and since they are all measured by the same meter, it is impossible to determine the cost as applied specifically to Physical Education.

TABLE 25: Shows the time spent, cost per hour, and the total cost for medical attention and supervision for the Woodrow Wilson High School students for the year 1930-1931 figured on the scale of one hour per week for each school and for each 1000 enrolled.

1339 Enrolled = 1 1/3 hours per week			
Name	Time in hours	Rate per hour	Total cost
School Physician	48	$2.1614	$103.75
Supervisor A	48	2.265	108.72
" B	48	2.005	96.24
" C	48	1.875	90.00
TOTAL COST			$398.71

TABLE 26: Shows the time spent, cost per hour, and the total cost for medical attention and supervision for the Long Beach Junior College Students for the year 1930-1931 figured on the scale of one hour per week for each school and for each 1000 enrolled.

957 Enrolled = 1 hour per week			
Name	Time in hours	Rate per hour	Total cost
School Physician	36	$2.1614	$ 77.81
Supervisor A	36	2.265	81.54
Supervisor B	36	2.005	72.18
Supervisor C	36	1.875	67.50
TOTAL			$299.03

The fact remains that very little light is used in the gymnasium because all of the activities are carried on by daylight. Since there is such an overlapping of so many factors involved in the cost of Physical Education for the two schools, it seems that the only just way to determine the average cost of Physical Education for each individual student is to take the enrollment, instruction cost, and cost of supplies as if they were for one school. The two schools are under the same administration, and therefore, should be treated as one unit in order to figure an accurate record of individual cost.

The formula used for arriving at this average cost was the total cost of operation of the high school divided by 1339, plus the total cost of operation of the junior college divided by 957, equals the total cost of both institutions divided by the total enrollment.

$$\frac{\text{Total Costs}(\$48,965.35)}{\text{W.W.H.S. Enrollment}(1339) \;\&\; \text{L.B.J.C. Enrollment}(957)} = \text{Average yearly cost per student } (\$21.326)$$

By adding the instructional supplies, janitorial supplies, instructors, building employees, supervisors,

physicians, nurses' salaries, we practically cover all costs necessary for the Physical Education program for both the Woodrow Wilson High School and the Long Beach Junior College which amounts to $48,965.35. Since this is the amount spent by the School Board of Long Beach for Physical Education, and by dividing this amount by 2296, the total student enrollment, we get an amount of $21.326 which represents the cost per pupil for the high school and junior college for ten months of Physical Education. Reducing this to the day basis, it would amount to eleven and one half cents per day for each student:

$$\frac{\text{Average yearly cost per pupil for ten months } (\$21.326)}{\text{Number of school days in ten months } (185)} = .115 \text{ average daily cost per pupil}$$

One little realizes just how many people it requires to put over an adequate Physical Education program. We do not stop to think that the caretakers of the lawns and playing field, the engineer, the night watchman, and the custodians, all play a very important part in any well organized Physical Education program.

The caretakers, night watchmen, and engineer are all listed under the heading, "Woodrow Wilson High School and Long Beach Junior College", in table 27 as the two

schools use the same gymnasiums and the same playing fields. A division can not easily be drawn for the two institutions. Table 27 gives the number of caretakers and night watchmen in both schools and salary of each.

The custodians of the boys and girls gymnasiums assume a large responsibility in that they have charge of all equipment and contact the pupils constantly during their Physical Educational experience. The custodians are responsible for the appearance and sanitary conditions of the plant and its equipment, including the condition of locker rooms, showers and toilets. They are responsible for instructional supplies, laundering of towels and condition, cleaning and repairing, of the equipment.

Table 28 gives the number, location and salaries of the custodians for Woodrow Wilson High School and Long Beach Junior College.

TABLE 27

Showing the number of Caretakers and Night Watchmen and their salaries.

NAME	SCHOOL	SALARY
Caretaker A	W.W.H.S.&L.B.J.C.	$1920.
" B	"	1620.
" C	"	1620.
" D	"	1620.
*Night Watchman	"	176.
*Head of Caretakers	"	170.
*School Engineer	"	160.
*Night Watchman		131.30
	TOTAL	$7,417.30

* Those marked with an asterisk spend 1/12 of their time on Physical Education; so 1/12 of their salary was all that was used in helping determine the unit cost of Physical Education in the two schools.

TABLE 28

Showing the Custodians for the boys and girls gymnasiums in the Woodrow Wilson High School and Long Beach Junior College and their salary for the year 1930-1931.

NAME	GYM	SALARY
Custodian A	Boys	$1740.
" B	Boys	1740
" C	Girls	1100.
" D	Girls	1100.
	TOTAL	$5,680.00

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this study was to determine the average yearly cost for the Woodrow Wilson High School and Long Beach Junior College students pursuing a course in Physical Education, of each article used by them, and each fee paid by them during the year 1930-1931.

The major activities considered in Physical Education were Golf, Tennis, Sports, Rhythms, for the Junior College and the usual Physical Education program as provided by the Long Beach school system for the High School boys and girls.

Under each major activity the following factors were considered on the basis of which the average cost was determined; shoes, socks, support, pants, jerseys, combination locks and miscellaneous expenses.

The cost items under these factors for each major activity were determined in total and average for Freshmen and Sophomore boys and Freshmen and Sophomore girls of the Junior College; and for Sophomore, Junior and Senior boys and girls of the High School. Instructional supplies for both institutions were included and salaries for teachers and building employees were included in the cost.

1. The average cost for a Woodrow Wilson High School boy for the year 1930-1931 was $5.27; for the girl $5.46.

2. The average cost for a Long Beach Junior College girl for the year 1930-1931 was $4.48; for the boy $5.35.

3. This High School has Physical Education five days a week while this Junior College has physical education two days a week.

4. The fact that girls use lighter shoes, and do not lose their combination locks so often accounts in part for the variation in the amount expended by the Long Beach Junior College girl and boy.

5. The Junior College girls retained more of their Physical Education equipment from High School than did the Junior College boys; thus the net costs for them were less.

6. The High School boys retained their gymnasium pants from Junior High School and cut down the cost over that of the Junior College classes. Many Junior College students had to buy new gymnasium costumes.

7. The girls in both High School and Junior College retained their locks from Junior High School and High School more than the boys; thus a smaller

net cost for locks for girls.

8. The girls in High School and Junior College spent more for miscellaneous expenses, due to Physical Education than did the boys. Ice Cream feeds, arm bands and belts were the three main items that made this total higher.

9. A few of the boys bought sweat jerseys, which is the main miscellaneous cost for boys.

10. The difference in cost of gymnasium shoes for boys over that of girls is due to the heavier shoes worn by boys.

11. The difference in total cost of socks for girls is due to the fact that the High School Girls' physical education classes meet five times per week, while the Junior College classes meet only twice per week.

12. The difference in total cost of middies and bloomers for High School and Junior College girls is due to the five class days in High School in comparison with two class days in Junior College.

13. The Girls Golf classes had to pay more fees than the boys as they received longer periods of individual instruction.

14. The girls were furnished with tennis rackets for Physical Education classes while the boys furnished their own rackets. This accounts for the other expenses running as high as they did. Restringing and buying new rackets and balls ran the average up.

15. The Rhythm classes had a uniform specially designed for rhythms classes which accounts for the extra fee in the rhythm classes.

16. The Junior College students who transfer from other schools spend more for equipment than those coming from Long Beach. This is due to lack of compulsory Physical Education in many schools.

17. Golf was found to be more expensive since this is the first year for it in Junior College for boys.

18. The yearly cost to the Long Beach School Board for the Physical Education program for the Woodrow Wilson High School and the Long Beach Junior College is $21.326 per year, per student enrolled. This cost is low when one considers the number of students that is enrolled in the physical education program.

19. More money is spent on the boys junior college instructional supplies while the girls had more money spent on their orthopedic, health, and first aid supplies.

20. There were more seniors enrolled in physical education than in any other class in high school.

21. Table 15 page 42 gives all the average costs of every article used, every fee paid and miscellaneous expenses of students in the Woodrow Wilson High School and the Long Beach Junior College for the year 1930-1931.

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