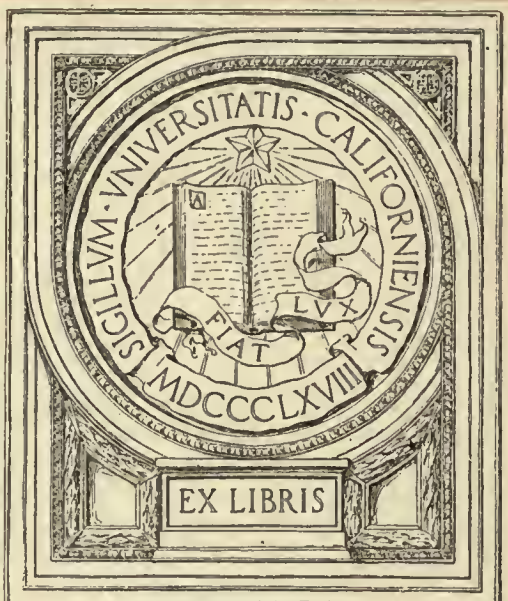

Unitary vs. multiple control of large city school systems of the United States

By

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THESIS

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Approved.....F. W. HART.....
Instructor in Charge

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CHAPTER I.

INTRODUCTION.

The question of efficiency in school administration as determined by the type of executive control has often been discussed but seldom studied scinetifically. Whether multiple cotrol is more efficient, as good as, or inferior to unitary executive control has not received the study its importance justifies.

Unitary executive control is one man control where there is a single executive head of the entire school system. Multiple executive control implies two or more executive heads.

The purpose of this study has been to find out whether the cost of education is greater in cities having one kind of executive control than in cities having the other. Are business or other departments better able to save money or to spend more wisely when not under the control of the superintendent? Is the cost of education greater in cities having multiple executive control or in cities having unitary executive control?

In an attempt to answer these questions a questionnaire (see following page) was sent out to the superintendents of all cities of one hundred thousand population or more. The

UNIVERSITY OF CALIFORNIA
Department of Education
BERKELEY

February 23, 1922.

TO THE SUPERINTENDENTS OF ALL CITIES
OF 100,000 POPULATION OR MORE.

My dear Superintendent:

Please supply me with the information called for on the bottom of this page. To be of service it must be returned within ten days. For your cooperation I will send you a summary of the report within a month.

Very sincerely yours,

Associate Professor in Education Administration.

FOR THE SCHOOL YEAR 1920 - 1921.

ENROLLMENT: Kindergarten_____ Elementary (1 to 8)_____
High School (9 to 12)_____ Total_____

AVERAGE DAILY ATTENDANCE: Kindergarten_____ Elementary (1 to 8)_____
High school (9 to 12)_____ Total_____

COST: Maintenance_____ Outlay_____

Are all executive departments subordinate to the Superintendent__

If not what departments report directly to the Board of Education_____

Please send me a copy of the rules of your Board of Education, your last annual report, statistical and financial report of the auditor or clerk and your last salary schedule.

returns were separated into two groups on the basis of their answers to the questions: "Are all executive departments subordinate to the Superintendent?" and "If not what departments report directly to the Board of Education"? The figures on enrollment, average daily attendance and cost were then tabulated and checked by reference to the printed reports called for. When we could not check, a second letter was sent defining just what was meant. A copy of this second letter is given on the following page. In some cases it was necessary to send several letters to get returns.

Per pupil costs were then figured for each city--regular maintenance or running expenses per pupil, and outlay per pupil. These were figured both on enrollment and on average daily attendance. Outlay is the amount invested during the year in permanent school facilities such as sites, buildings, improvements, fixtures and equipment. Maintenance includes all other expense of the school system, administration, supervision, instruction, heating, lighting, and janitor services, etc.

These per pupil costs were ranked for each group of cities, for those having multiple executive control and for those having unitary executive control, and the medians and means found for each. These median and mean costs were

UNIVERSITY OF CALIFORNIA
Department of Education
BERKELEY

March 15, 1922.

Superintendent of Schools,
Kansas City, Kansas.

My dear Sir:

I wish to thank you for your very prompt attention to the request for costs and enrollment data in my recent letter, a copy of which is attached. There is, however, one point upon which we did not get a uniform interpretation, namely, "outlay" and "maintenance."

By "OUTLAY" we wish to secure the amount invested during the year 1920-21 in permanent school facilities such as sites, buildings, improvements, fixtures and equipment.

Under "MAINTENANCE" we wish classified all other expense of the school system including administration, supervision, instruction, heating, lighting and janitor service, etc. Will you be kind enough to give us a re-statement of these two items?

We have thus far had more than 40 returns from the cities of 100,000 or more. The tabulation of the returns received is tending to show a very pronounced advantage in unified control as opposed to multiple control.

Very sincerely yours,

_____
Associate Professor in Educational Administration.

KANSAS CITY, KANSAS 1920-21.

MAINTENANCE_____

OUTLAY_____

FWH:JA

ENC.

figured at three different times, each time using all the returns then in; and each time the results were substantially the same. Therefore it is quite certain that the figures in the tables give a very true picture of the situation.

Later a similar questionnaire was sent to the superintendents of all cities having a population between twenty-five thousand and one hundred thousand. The returns were treated in much the same manner except that per pupil costs were not figured for each city but for each group of cities; that is, for those under multiple executive control and for those under unitary executive control.

As a further check per pupil costs of education under multiple executive control and under unitary executive control were figured for the school year 1917 - 1918. This was figured from data made available in the United States Bureau of Education's Bulletin entitled "Statistics of City School Systems", published in 1920.

From the data secured by the questionnaire it was also possible to figure the percent of attendance and the holding power of the high school for each city and for each group of cities. The percent of attendance was found by dividing the total average daily attendance by the total enrollment. The holding power of the high school was found by

dividing the average daily attendance of the high school by the total average daily attendance, that is, by the average daily attendance of the kindergarten, elementary and high school combined. This was done for each city in the group of the larger cities or those over one hundred thousand population, but not for those in the group of smaller cities. In the latter case the cities were not treated, individually.

CHAPTER II.

FINANCIAL DIFFERENCES.

It is readily seen from the tables that follow (pages 13 to 26) that the cost of education under multiple executive control is uniformly greater than the cost under unitary executive control.

Table V, page 17 , gives in summary form the mean and median costs of tables I to IV inclusive, together with figures on total cost of education per pupil with differences between the unitary and the multiple groups for the school year 1920-21. Thus it is seen that the mean total cost of education per pupil enrolled is eighty-three dollars and fifty-five cents ($83.55) for that group of cities having unitary control, and ninety-four dollars and sixteen cents ($94.16) for the group having multiple control. That is, the mean cost of education per pupil enrolled is ten dollars and sixty-one cents ($10.61) more in those cities having multiple control than in those having unitary control. When figured on average daily attendance the mean total cost of education is one hundred one dollars and thirty-one cents ($101.31) per pupil in those cities having unitary control, and one hundred fifteen dollars and sixty-one cents ($115.61) per pupil in

those cities having multiple control. That is, it costs fourteen dollars and thirty cents ($14.30) more per pupil in the cities having multiple control than in those with unitary control.

The median costs per pupil show even more striking differences. The median total cost of education per pupil enrolled is for those cities having unitary control seventy-three dollars and seventy-nine cents ($73.79), and for those having multiple control eighty-seven dollars and forty-five cents ($87.45). The median cost per pupil enrolled is seen to be thirteen dollars and sixty-six cents ($13.66) greater in cities having multiple control of their school systems than in those cities having unitary control. Figured on average daily attendance the median total cost of education per pupil is ninety-one dollars and forty-two cents ($91.42) for those cities having unitary control, and one hundred six dollars and forty-five cents ($106.45) for cities with multiple control. Or, the total cost of education per pupil in average daily attendance is over fifteen dollars greater in cities having multiple control than it is in those cities having unitary control of their school systems.

From Table VI, page 18 , it is seen that in the group of smaller cities the mean cost per pupil enrolled for maintenance is four dollars and sixty-seven cents ($4.67) high-

or in those cities having multiple executive control. The cost for outlay in those cities is seen to be one dollar and thirty-eight cents ($1.38) higher. The mean cost per pupil in average daily attendance is seen to be ten dollars and seventeen cents ($10.17) higher in the cities having multiple control. For outlay it is two dollars and ninety-two cents ($2.92) more. The total cost of education per pupil enrolled is seen to be six dollars and five cents ($6.05) more, and the total cost of education per pupil in average daily attendnace, thirteen dollars and nine cents ($13.09) more in those cities having multiple executive control than in those having unitary executive control.

In table VII, page 20 , it is seen that the same thing held true during 1917 - 1918. The mean cost of education per pupil in average daily attendance was nine dollars and twenty-five cents ($9.25) higher in cities having multiple executive control.

TABLE I.

A COMPARISON OF THE COST OF MAINTENANCE PER PUPIL ENROLLED UNDER MULTIPLE EXECUTIVE CONTROL AND UNDER UNITARY EXECUTIVE CONTROL IN CITIES OF THE UNITED STATES OF 100,000 POPULATION AND OVER FOR THE SCHOOL YEAR 1920 - 1921, WITH FIGURES FOR THE INDIVIDUAL CITIES.

MULTIPLE CONTROL		UNITARY CONTROL.	
Indianapolis	$105.08	Buffalo	$98.53
Seattle	99.40	Columbus	94.95
Cleveland	92.06	Oakland	93.81
Portland	90.22	Des Moines	88.83
Grand Rapids	89.31	Yonkers	87.98
Philadelphia	88.05	Detroit	82.93
Boston	87.59	Washington	81.51
Toledo	87.34	Minneapolis	77.68
St. Louis	78.42	Jersey City	75.27
New Orleans	75.37	Fall River	73.67
Spokane	74.96	Lowell	70.60
Worcester	74.85	Denver	70.02
San Francisco	73.61	New Bedford	67.10
Newark	69.60	Salt Lake City	66.96
Chicago	68.63	Trenton	66.89
Youngstown	68.49	Paterson	66.87
Scranton	65.26	Cambridge	64.58
Milwaukee	64.06	Norfolk	59.60
Providence	63.57	Kansas City, Kan.	59.19
Dayton	61.37	Baltimore	58.06
Los Angeles	60.55	Reading	54.51
Bridgeport	58.95	Richmond	46.24
Louisville	57.77	Birmingham	40.76
San Antonio	40.56	Atlanta	40.60
		Nashville	27.29
Mean	74.79	Mean	68.579
Median	74.23	Median	67.10
George Strayer	73.05	John Tassey	69.18

TABLE II.

A COMPARISON OF THE COST OF MAINTENANCE PER PUPIL IN AVERAGE DAILY ATTENDANCE UNDER MULTIPLE EXECUTIVE CONTROL AND UNDER UNITARY EXECUTIVE CONTROL IN CITIES OF THE UNITED STATES OF 100,000 POPULATION AND OVER FOR THE SCHOOL YEAR 1920 - 1921, WITH FIGURES FOR THE INDIVIDUAL CITIES.

MULTIPLE CONTROL		UNITARY CONTROL	
Seattle	$122.14	Buffalo	$122.59
Indianapolis	118.39	Oakland	110.98
Portland	116.13	Columbus	107.83
Toledo	116.10	Detroit	107.55
Los Angeles	107.08	Des Moines	106.27
Boston	106.41	Yonkers	104.53
San Francisco	105.96	Washington	100.92
Grand Rapids	105.15	Minneapolis	95.13
Cleveland	99.98	Denver	92.65
Philadelphia	98.85	Jersey City	91.04
Spokane	94.68	Paterson	85.71
Newark	94.23	Lowell	85.32
Worcester	87.47	Trenton	83.11
Youngstown	86.98	Fall River	80.79
St. Louis	86.83	Salt Lake City	79.44
New Orleans	85.47	Cambridge	74.35
Chicago	84.16	New Bedford	74.16
Scranton	77.40	Kansas City, Kan.	72.99
Milwaukee	77.05	Baltimore	71.24
Providence	75.77	Norfolk	66.54
Louisville	74.29	Richmond	60.31
Dayton	71.62	Reading	55.94
Bridgeport	69.02	Birmingham	47.69
San Antonio	50.07	Atlanta	43.16
		Nashville	33.30
Mean	92.134	Mean	82.41
	85.16		88.10
Median	90.85	Median	83.11

TABLE III.

A COMPARISON OF THE COST FOR OUTLAY PER PUPIL ENROLLED UNDER MULTIPLE EXECUTIVE CONTROL AND UNDER UNITARY EXECUTIVE CONTROL IN CITIES OF THE UNITED STATES OF 100,000 POPULATION AND OVER FOR THE SCHOOL YEAR 1920 - 1921, WITH FIGURES FOR THE INDIVIDUAL CITIES.

MULTIPLE CONTROL		UNITARY CONTROL	
Indianapolis	$80.75	Detroit	$63.84
Dayton	72.54	Baltimore	45.91
Grand Rapids	30.70	Salt Lake City	40.34
Toledo	30.68	Denver	33.34
Cleveland	30.09	Jersey City	32.86
Youngstown	27.21	Paterson	31.94
Chicago	18.28	Yonkers	28.47
Newark	18.02	Minneapolis	23.82
Los Angeles	16.43	Norfolk	17.88
Portland	13.79	New Bedford	11.72
Scranton	13.22	Des Moines	8.72
Boston	12.95	Washington	8.09
Milwaukee	12.92	Trenton	6.69
New Orleans	12.77	Kansas City, Kan.	5.73
Worcester	10.13	Fall River	5.57
Spokane	9.84	Oakland	5.51
Bridgeport	9.51	Reading	4.49
St. Louis	8.64	Omaha	3.00
Seattle	5.76	Richmond	2.39
Philadelphia	4.54	Nashville	2.28
Providence	2.44	Cambridge	2.06
Louisville	2.13	Atlanta	2.06
San Antonio	2.09	Columbus	1.76
		Lowell	.68
		Birmingham	.58
Mean	19.366	Mean	14.989
Median	13.22	Median	6.69

TABLE IV.

A COMPARISON OF THE COST FOR OUTLAY PER PUPIL IN AVERAGE DAILY ATTENDANCE UNDER MULTIPLE EXECUTIVE CONTROL AND UNDER UNITARY EXECUTIVE CONTROL IN CITIES OF THE UNITED STATES OF 100,000 POPULATION AND OVER FOR THE SCHOOL YEAR 1920 - 1921, WITH FIGURES FOR THE INDIVIDUAL CITIES.

MULTIPLE CONTROL		UNITARY CONTROL	
Indianapolis	$90.98	Detroit	$82.74
Dayton	84.66	Baltimore	56.35
Toledo	40.78	Salt Lake City	47.86
Grand Rapids	36.15	Denver	44.12
Youngstown	34.56	Paterson	40.94
Cleveland	32.68	Jersey City	39.74
Los Angeles	29.05	Yonkers	33.83
Newark	24.39	Minneapolis	29.17
Chicago	22.41	Norfolk	19.96
Portland	17.75	New Bedford	12.95
Boston	15.73	Des Moines	10.44
Scranton	15.60	Washington	10.02
Milwaukee	15.54	Trenton	8.31
New Orleans	14.49	Kansas City, Kan.	7.06
Spokane	12.52	Oakland	6.52
Worcester	11.84	Fall River	6.11
Bridgeport	11.13	Reading	4.61
St. Louis	9.56	Omaha	3.63
Seattle	7.07	Richmond	3.12
Philadelphia	5.10	Atlanta	3.03
Providence	2.90	Nashville	2.79
Louisville	2.74	Cambridge	2.36
San Antonio	2.58	Columbus	2.00
		Lowell	.83
		Birmingham	.68
Mean	23.483	Mean	19.166
Median	15.60	Median	8.31

TABLE V a.

A COMPARISON OF THE COST OF EDUCATION ON A PER PUPIL BASIS UNDER MULTIPLE CONTROL AND UNDER UNITARY CONTROL IN CITIES OF THE UNITED STATES OF 100,000 POPULATION AND OVER FOR THE SCHOOL YEAR 1920 - 1921.*

PER PUPIL COSTS OF EDUCATION.

MEASURE AND BASIS OF CALCULATION.	Under Multiple Control	Under Unitary Control	DIFFERENCES IN FAVOR OF Multiple Control	Unitary Control
Mean Cost Figured on Enrollment				
a. For Maintenance	$ 74.79	$ 68.56	$ 00.00	$6.23
b. For Outlay	19.37	14.99	00.00	4.38
Total	$ 94.16	$ 83.55	$ 00.00	$10.31
Mean Cost Figured on Av. Daily Attendance.				
a. For Maintenance	$ 92.13	$ 82.14	$ 00.00	$9.99
b. For Outlay	23.48	19.17	00.00	4.31
Total	$115.61	$101.31	$ 00.00	$14.30
Median Cost Figured On Enrollment				
a. For Maintenance	$ 74.23	$ 67.10	$ 00.00	$7.13
b. For Outlay	13.22	6.69	00.00	6.53
Total	$ 87.45	$ 73.79	$ 00.00	$13.66
Median Cost Figured on Av. Daily Attendance.				
a. For Maintenance	$ 90.85	$ 83.11	$ 00.00	$7.74
b. For Outlay	15.60	8.31	00.00	7.29
Total	$106.45	$ 91.42	$ 00.00	$15.03

* Seventy-five percent of the cities sent complete replies; eleven percent sent incomplete, and fourteen percent none.

TABLE V b.

A COMPARISON OF THE COST OF EDUCATION ON A PER PUPIL BASIS UNDER MULTIPLE CONTROL AND UNDER UNITARY CONTROL IN CITIES OF THE UNITED STATES OF 100,000 POPULATION AND OVER FOR THE SCHOOL YEAR 1920 - 1921.*

PER PUPIL COSTS OF EDUCATION.

MEASURE AND BASIS OF CALCULATION	Under Multiple Control	Under Unitary Control	Difference in favor of Multiple Control	Difference in favor of Unitary Control
Mean Cost Figured On Enrollment				
a. For Maintenance	$ 74.77	$ 68.82	$ 00.00	$ 5.95
b. For Outlay	18.97	14.59	00.00	4.38
Total	$ 93.74	$ 83.41	$ 00.00	$10.33
Mean Cost Figured On Av. Daily Attendance				
a. For Maintnance	$ 91.93	$ 82.03	$ 00.00	$ 9.90
b. For Outlay	22.88	18.42	00.00	4.46
Total	$114.81	$100.45	$ 00.00	$14.36

* Based upon answers from eighty-four percent of the cities of the United States of 100,000 population and over. Fifty-seven of the sixty-eight cities are included, twenty-six having multiple and thirty-one having unitary executive control.

TABLE VI.

A COMPARISON OF THE COST OF EDUCATION UPON A PER PUPIL BASIS UNDER MULTIPLE CONTROL AND UNDER UNITARY CONTROL IN CITIES OF THE UNITED STATES WITH FROM 25,000 TO 100,000 POPULATION FOR THE SCHOOL YEAR 1920 - 1921.*

PER PUPIL COSTS OF EDUCATION.

MEASURE AND BASIS OF CALCULATION.	Under Multiple Control	Under Unitary Control	Differences in favor of Multiple Control	Differences in favor of Unitary Control
Mean Cost Figured on Enrolment				
a. For Maintenance	$ 72.45	$67.78	$ 00.00	$ 4.67
b. For Outlay	19.99	18.61	00.00	1.38
Total	$ 92.44	86.39	$ 00.00	$ 6.05
Mean Cost Figured on Aver. Daily Attendance.				
a. For Maintenance	$ 91.29	$ 81.12	$ 00.00	$10.17
b. For Outlay	25.19	22.27	00.00	2.92
Total	$116.48	$103.39	$ 00.00	$13.09

* Based upon eighty-nine replies to our questionnaire.

TABLE VII.

A COMPARISON OF THE MEAN COSTS OF EDUCATION PER PUPIL IN AVERAGE DAILY ATTENDNACE UNDER MULTIPLE EXECUTIVE CONTROL AND UNDER UNITARY EXECUTIVE CONTROL IN CITIES OF THE UNITED STATES OF 100,000 POPULATION AND OVER FOR THE SCHOOL YEAR 1917 - 1918.*

	Unitary	Multiple	Difference
Outlay	$ 6.88	$ 9.88	$3.00
General Control	1.65	2.50	.85
Instruction	39.22	42.07	2.85
Operation of Plant	6.52	6.68	.16
Maintenance	2.25	2.78	.53
Int. on Debt, etc.	2.69	4.22	1.53
Auxiliary Agencies	.99	1.32	.33
Totals	$60.20	$69 .45	$9.25

* Based upon data from Bonner, H. R., "Statistics of City School Systems", U. S. Bureau of Education, Bulletin 1920, Number 24.

CHAPTER III.

MEASURES OF QUALITY.

The measurement of quality in the school systems studied has necessarily been very limited. Only a complete survey could do justice to the individual cities. But percent of attendance and holding power may give us an idea of the quality.

With this in mind tables VIII to XII, pages 22 to 26 were compiled from the data furnished by the questionnaires. Tables VIII, IX, and X give the percent of attendnace for the two groups of cities, the multiple and the unitary. Tables XI and XII give the holding power of the high school.

It is seen from these tables that in both the mean and the median percents, the cities having unitary executive control have somewhat better attendance. Likewise it is seen that in both the mean percent and the median percent the cities having unitary control have a little better holding power. This is more evident in the median percents, the median percent being fourteen and forty hundredths (14.40%) for the group having unitary control, and thirteen and fourteen hundredths (13.14%) for the group having multiple control.

TABLE VIII.

A COMPARISON OF THE PERCENT OF ATTENDANCE UNDER MULTIPLE EXECUTIVE CONTROL AND UNDER UNITARY EXECUTIVE CONTROL IN CITIES OF THE UNITED STATES OF 100,000 POPULATION AND OVER FOR THE SCHOOL YEAR 1920 - 1921, WITH PERCENTAGES FOR THE INDIVIDUAL CITIES.

MULTIPLE CONTROL		UNITARY CONTROL	
Cleveland	92.08%	Wilmington	98.04%
St. Louis	90.32	Reading	97.43
Philadelphia	89.07	Akron	95.95
Indianapolis	88.76	Atlanta	94.06
New Orleans	88.17	Fall River	91.18
Dayton	85.68	New Bedford	90.48
Worcester	85.58	Norfolk	89.57
Bridgeport	85.44	Columbus	88.05
Grand Rapids	84.91	Cambridge	86.87
Scranton	84.72	Birmingham	85.47
Providence	83.91	Oakland	84.53
Milwaukee	83.14	Salt Lake City	84.29
Boston	82.31	Yonkers	84.16
Chicago	81.55	Des Moines	83.58
San Antonio	80.79	Rochester	82.89
Spokane	79.17	Washington	82.21
Youngstown	78.73	Lowell	82.75
Louisville	77.76	Jersey City	82.68
Portland	77.68	Omaha	82.61
Toledo	75.23	Nashville	81.95
Newark	73.86	Minneapolis	81.66
San Francisco	69.47	Baltimore	81.49
Los Angeles	56.55	Kansas City, Kan.	81.10
		Trenton	80.49
		Buffalo	80.37
		Paterson	78.02
		Detroit	77.16
		Richmond	76.66
		Denver	75.57
		Fort Worth	75.45
Mean	81.51	Mean	84.58
Median	82.73	Median	82.85

TABLE IX.

A COMPARISON OF THE PERCENT OF ATTENDANCE UNDER MULTIPLE CONTROL AND UNDER UNITARY CONTROL IN CITIES OF THE UNITED STATES OF 100,000 POPULATION AND OVER FOR THE SCHOOL YEAR 1920 - 1921.*

PERCENT TOTAL AVERAGE DAILY ATTENDANCE IS OF TOTAL ENROLLMENT.

MEASURE OF PERCENT OF ATTENDANCE	Under Multiple Control	Under Unitary Control	Differences in favor of	
			Multiple Control	Unitary Control
Mean Percent	81.51	84.58	00.00	3.07
Median Percent	82.73	82.85	00.00	.12

* Based upon data from eighty percent of the cities of the United States having 100,000 population or over.

TABLE X.

A COMPARISON OF THE PERCENT OF ATTENDANCE UNDER MULTIPLE CONTROL AND UNDER UNITARY CONTROL IN CITIES OF THE UNITED STATES WITH FROM 25,000 TO 100,000 POPULATION FOR THE SCHOOL YEAR 1920 - 1921.*

PERCENT OF ATTENDANCE.

Under Multiple Control	Under Unitary Control	Difference in Favor of Multiple Control	Difference in Favor of Unitary Control
79.36%	83.55%	0.00%	4.19%

* Based upon eighty-nine replies to our questionnaire.

TABLE XI.

A COMPARISON OF THE HOLDING POWER OF THE HIGH SCHOOL UNDER MULTIPLE EXECUTIVE CONTROL AND UNDER UNITARY EXECUTIVE CONTROL IN CITIES OF THE UNITED STATES OF 100,000 POPULATION AND OVER FOR THE SCHOOL YEAR 1920 - 1921, WITH FIGURES FOR THE INDIVIDUAL CITIES.

MULTIPLE CONTROL		UNITARY CONTROL	
Spokane	20.57%	Des Moines	21.37%
Seattle	20.24	Minneapolis	18.65
Portland	20.01	Fort Worth	18.39
Grand Rapids	19.19	Paterson	18.03
Los Angeles	18.35	Columbus	18.02
San Antonio	17.08	Cambridge	17.31
Indianapolis	16.05	Denver	16.86
Dayton	15.33	Omaha	16.67
Boston	14.98	Oakland	15.80
San Francisco	14.56	Washington	15.38
Worcester	14.38	Akron	15.29
Louisville	14.00	Atlanta	15.05
Toledo	12.28	Birmingham	14.64
Milwaukee	11.78	Wilmington	14.48
Youngstown	11.36	Salt Lake City	14.32
Bridgeport	11.12	Lowell	14.15
Cleveland	11.07	Norfolk	12.94
Providence	10.89	Buffalo	12.59
St. Louis	10.76	Reading	12.54
Scranton	10.45	Detroit	11.67
Philadelphia	9.45	Kansas City, Kan.	11.55
Newark	8.95	Yonkers	11.05
Chicago	8.56	Nashville	10.01
New Orleans	6.10	Fall River	9.31
		Rochester	8.98
		Baltimore	8.17
		New Bedford	6.10
		Trenton	6.06
Mean	13.644	Mean	13.764
Median	13.14	Median	14.400

TABLE XII.

A COMPARISON OF THE HOLDING POWER OF THE HIGH SCHOOL UNDER MULTIPLE CONTROL AND UNDER UNITARY CONTROL IN CITIES OF THE UNITED STATES OF 100,000 POPULATION AND OVER FOR THE SCHOOL YEAR 1920 - 1921.*

PERCENT AVERAGE DAILY ATTENDANCE OF THE HIGH SCHOOL IS OF THE TOTAL AVERAGE DAILY ATTENDANCE.

MEASURE OF HOLDING POWER	Under Multiple Control	Under Unitary Control	Differences in favor of Multiple Control	Differences in favor of Unitary Control
Mean Percent	13.64	13.76	00.00	.12
Median Percent	13.14	14.40	00.00	1.26

* Based upon data from eighty percent of the cities of the United States of 100,000 population and over.

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

CHAPTER IV.

CONCLUSION.

There can be little doubt that the cost of education under multiple executive control is greater than that under unitary executive control. In not one instance was there a penny in favor of the multiple group no matter what the year or what the size of the group. The year 1917 - 1918 gave results similar to the year 1920 - 1921. The cities between twenty-five thousand and one hundred thousand population gave results similar to those for the larger cities.

Even in the few measures of quality that it was possible to get, the cities having unitary executive control in every case surpassed the cities having multiple executive control.

The great cost of multiple control is better understood if per pupil costs are translated into total amounts spent. There are close to ten million boys and girls in the city schools in our country. (In 1917 there were over eight and one half million pupils enrolled in the city public schools[1].) For the fiscal year ending 1921 the cost per pupil enrolled was over ten dollars greater in cities having multiple control than in those having unitary control. ($10.61, mean; $13.66 median; table V, page 17.) If all cities were to have multiple or divided executive control of their school systems, it would

1. Statistical Division, Bureau of Education, Statistics of City School Systems 1917-18, Gov't. Print. Office, Washington, 1920, page 17.

seem that the additional cost would run into hundreds of millions.

The cities having multiple control are violating the best principles of educational administration laid down by our most outstanding educators. They are violating the principles of efficient business administration and the best principles of public administration. Yet from a careful study of the facts herein presented no justification for such violation can be found. Multiple executive control of school systems seems to be expensive and inefficient. It certainly is not justified by any of the facts brought out.

B I B L I O G R A P H Y.

All School Surveys, such as those of:

Atlanta, Baltimore, Blaine, Boise, Boston, Bridgeport, Buffalo, Butte, Chicago, Cleveland, Dallas, Danseville, Denver, East Orage, Grafton, Grand Junction, Grand Rapids, Greenwich, Hackensack, Hammond, Leavenworth, Minneapolis, Montclair, Newburgh, New York City, Oakland, Ogden, Peoria, Portland, Port Townsend, Rockford, Salt Lake City, San Antonia, San Francisco, Springfield, South Bend, St. Louis, St. Paul, Syracuse, Waterbury, etc.

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