DOCUMENT RESUME

ED 023 152 EA 001 567

By - Vincent, William S.

New Light on the Size Question.

Columbia Univ., New York. Inst. of Administrative Research.
Pub Date Feb 66
Note - 7p.
Journal Cit - IAR Research Bulletin; v6 n2 p4-8 Feb 1966
EDRS Price MF - $0.25 HC - $0.45
Descriptors - *Boards of Education, *Educational Quality, Expenditures, *Financial Policy, School Budget Elections, *School Districts, School Taxes, *Student Enrollment

The effects of school size, fiscal independence, fiscal dependence, public vote, and tax limitation on 11 measures of educational quality are investigated. Data obtained from 1222 city school districts are analyzed statistically. The data substantiate the conclusions of previous observers that excessive school district size reduces the effectiveness of administration in developing and maintaining an adequate "rogram of education. The critical point of size varies somewhat depending upon the quality factor in question. The major conclusion is that fiscally independent school districts outperform fiscally dependent school districts. Public vote districts exhibit a fiscal performance that is superior both to dependent districts and to independent districts without public vote. Districts with a tax limitation and fiscally dependent districts perform equally well. (HW)

New Light On The Size Question

William S. Vincent

One of the most persistent questions recurrent in educational planning refers to the size of organizational units. How large should schools be in terms of pupil enrollment? How large should school districts be in terms of population? Can districts be too large as well as too small? How large is too large? Is there an optimum size range; if so what is it? The issue relates to quality on the one hand and efficiency or economy on the other. How does size contribute to or detract from quality, or economy of operation?

Among the earliest quantitative data bearing upon the size question were the results obtained by Mort and Cornell in the famous Pennsylvania study.[1] They found school district size measured by average daily attendance to be strongly related to a criterion of quality. Actually, in an analysis of covariance they obtained a correlation of .434 for size, indicated by a chi-square test to be significant at the 1% level. However, all of the districts in this study were under 100,000 in total population. This and other evidence lent weight to the campaign to eliminate the excessively small districts. During the peak of the centralization movement the argument was to convince voters that abandonment of their one-room school in favor of a larger unit would result in better education for less money.

More recently the size issue has taken a turn in the opposite direction. It begins to appear that continued consolidation of smaller school districts, coupled with rapid population growth particularly in suburban areas, may result in school districts whose size is considerably in excess of what was once considered optimum. While it must be admitted that notions of optimum size derive less from factual evidence than from distillations of experience and common sense, there is good reason to believe that school districts can be too large as well as too small. Two decades ago a comparison of the schools of New York City with those of smaller districts of comparable expenditure level indicated that "returns for money spent" were not so great in the large city districts as in the smaller districts.[2] Size, as well as many other factors, has been investigated in the studies in adaptability carried on over the years in the Institute of Administrative Research. Swanson attempted to summarize the implication of these studies as they bear upon the relation of school district size to school quality.[3] He suggested that the relationship is non-linear and proposed a theoretical regression based upon the evidence from these studies. According to Swanson's regression the range from 20,000 to 50,000 community population shows a strong positive correlation between population size and school quality. The magnitude of the correlation declines above 50,000 population, probably becoming negative at some upper extreme of the size range. Just where his upper extreme might be, he cannot make clear, because there is little evidence bearing upon the question. The likelihood is that maximum critical size may vary somewhat, depending upon other circumstances. One might expect that this is one place where superior administrative acumen might exert itself, given a chance by the organizational arrangements under which it operates.

As for extreme size (populations of one million and over) it has been known for many years that giant school districts in this range have suffered in the adequacy of their educational program and in returns for money spent. The complexities of the giant operation appear to be such that staff communication, public expectancy, and unit variability within the school system are enormously hampered. For the last three decades a number of studies have attempted to assess the influence of bigness both upon policy making and upon educational costs. Studies by Ebey[4], Cillie[5], Westby[6], Hicks[7], as well as the one already cited by Leggett and Vincent have all dealt with the lack of adaptability of big city school systems and the costs inherent in this situation.

[1] Paul R. Mort, and Francis G. Cornell, *American Schools in Transition.* New York: Bureau of Publications, Teachers College, Columbia University, 1941. Pp. 125ff.

[2] Stanton F. Leggett, and William S. Vincent, *A Program for Meeting the Needs of New York City Schools.* New York. Public Education Association, 1947.

[3] IAR RESEARCH BULLETIN, "Relations Between Community Size and School Quality", Vol. 2, No. 1, October, 1961.

[4] George W. Ebey, *Adaptability Among the Elementary Schools of an American City.* New York: Bureau of Publications, Teachers College, Columbia University, 1940.

[5] Francois S. Cillie, *Centralization or Decentralization? A Study in Educational Adaptation.* New York: Bureau of Publications, Teachers College, Columbia University, 1940.

[6] Cleve O. Westby, *Local Autonomy for School-Communities in Cities. Revised* edition, New York: Bureau of Publications, Teachers College, Columbia University, 1947.

[7] Alvin W. Hicks, *A Plan to Accelerate the Process of Adaptation in a New York City School-Community.* New York: Unpublished Ed. D. Project, Teachers College, Columbia University, 1942.

Fiscal Performance of School Districts

Some new evidence is now available from a study of 1222 city school districts in the 48 continental United States undertaken by this writer for the Temporary Commission on City Finances of the City of New York. While still indirect, the evidence is highly suggestive that extreme school district size is itself a factor at least as influential as any control arrangement under which school boards may operate (such as public vote or fiscal dependence or tax limitation) in determining the ability of boards to meet the fiscal needs of schools.

This was a study of fiscal responsibility, the question of fiscal dependence or independence of school boards. Since regulations in this area are intimately intertwined with requirements for public vote, tax limitation, or both, school districts in the total sample were examined in terms of these four functional groupings: fiscal dependence, fiscal independence, public vote, and tax limitation. While the first two groupings are mutually exclusive, a school district which is either fiscally dependent or fiscally independent may have either, or both, of the other arrangements. The major groupings were further divided into six size groups ranging from small (enrollments from 3,000 to 5,999 pupils) to largest (enrollments of more than 100,000 pupils). In the 50 states there are 21 school districts of more than 100,000 pupils, of which 17 were studied. There are 49 school districts enrolling 50,000 to 99,000 pupils, of which 41 were studied. Thus 58 of the 70 school districts in the United States at the extreme high end of the size range were examined in this study.

Principally fiscal data were analyzed, plus certain easily obtainable measures that have been shown to be related to school quality. During the past twenty years of rapid economic growth and monetary inflation the schools have been under heavy competition from other sectors of the economy to maintain their position in the total economic complex. Competition comes from the increasing requirements of municipal government, which shares the same local tax resources, as well as from private and governmental employers who compete for the available pool of college graduates. The arrangements under which boards are required by state legislatures to obtain budget approval should have some bearing upon the capacity of a board to compete fiscally for the benefit of the schools. This capacity should show up in certain fiscal measures, not only currently but historically over the past two decades of rapid economic change. We see that indeed it does.

A preliminary analysis of the data by functional groups and size groups has been made by means of a comparison of differences of means. The major conclusion to be derived from this analysis is that in almost every way the group of school districts that are fiscally independent show up better than the group of school districts that are fiscally dependent. The independent districts exceed the dependent districts in *net current expenditure, amount raised locally, proportion of local revenues going to schools, teachers salaries* (average salaries, beginning salaries, and maximum salaries), *class size, clerical assistance, guidance counselors,* and *expenditures for library and audio-visual aids.* The only category examined in which the fiscally dependent districts were superior is *librarians.* Furthermore, in the first two fiscal categories, *net current expenditure* and *amount raised locally,* the growth rate of the fiscally independent districts has been greater since 1952.

The evidence further indicates that the public vote districts exhibit a fiscal performance, determined by the above measures, that is clearly superior *both* to the dependent districts and to the independent districts without public vote. As for tax limitation, the disricts with this form of restriction look about the same as the fiscally dependent districts. In terms of amount raised locally they are slightly below dependent districts. In net current expenditure, they are slightly above. Historically, they have done better in state aid. Perhaps state legislatures that require local boards to operate under a tax limit have in consequence been more generous in state aid. In salary data the tax limit districts are below the independent and public vote districts, but slightly above the dependent districts. A similar relation holds for virtually every other fiscal and quality related factor examined, including number of teachers per thousand pupils, guidance counselors, librarians, clerical workers, and library-audio visual expenditures.

The Effects of School District Size

Thus a clear superiority in fiscal performance distinguishes the independent districts, and particularly those with public vote. Inferiority in fiscal performance and in economic competition appears to be the lot of dependent districts and districts operating under a tax limitation. However, *this phenomenon is not consistent throughout the six size groups.* With respect to most of the measures of fiscal performance examined the superiority of independence and public vote is not apparent except for districts below 50,000 pupils (Size Group 3, 4, 5, and 6) and

FISCAL PERFORMANCE OF 1222 SCH

MEANS OF ELEVEN MEASURES BY SIZE OF DISTRICT AND BY FISCAL DEPENDEN

		Size Group No. 1 *100,000 Pupils or More*		*Size Group No. 2* *50,000-99,999 Pupils*		*Size Group No. 3* *25,000-49,999 Pupils*		*Size* *12,00*
		N	*Mean*	*N*	*Mean*	*N*	*Mean*	*N*
1. Net Current Expenditure/ADA 1962	Dep.	10	$432.72	21	$372.19	29	$375.03	72
	Ind.	7	401.52	26	365.90	22	394.59	115
	P.V.	3	447.86	20	390.18	11	361.42	81
	Tax L	10	446.04	32	376.60	28	383.52	97
2. Net Current Expenditure/ADA 1952	Dep.	9	225.41	19	229.19	25	238.33	59
	Ind.	6	270.07	24	225.88	20	223.00	100
	P.V.	3	267.24	18	238.75	11	226.68	75
	Tax L	9	260.92	29	232.95	24	228.42	85
3. Net Current Expenditure/ADA 1942	Dep.	8	109.27	19	99.29	23	106.29	48
	Ind.	6	126.90	22	130.98	15	91.53	35
	P.V.	3	137.39	18	130.22	8	94.58	59
	Tax L	9	131.24	27	123.14	18	95.14	60
4. Growth Index—1952-62	Dep.	9	.54077	19	.61526	25	.64954	59
	Ind.	7	.62119	24	.62188	20	.58191	99
	P.V.	4	.54971	18	.61038	11	.66938	75
	Tax L	10	.58272	29	.61667	24	.63952	85
5. Growth Index—1942-62	Dep.	8	.25407	19	.26057	23	.27802	48
	Ind.	7	.27581	22	.33715	15	.24292	75
	P.V.	4	.24932	18	.32223	8	.27513	59
	Tax L	10	.27489	27	.30846	18	.26274	60
6. Amount Raised Locally/ADA 1962	Dep.	9	$320.93	21	$258.77	29	$286.94	72
	Ind.	8	329.36	26	272.95	22	248.53	115
	P.V.	4	282.58	20	294.90	11	237.90	81
	Tax L	11	315.15	32	266.81	28	263.40	97
7. Amount Raised Locally/ADA 1952	Dep.	8	201.29	19	175.39	25	185.04	59
	Ind.	7	226.03	24	178.09	20	159.57	100
	P.V.	4	202.41	18	189.60	11	155.71	76
	Tax L	10	204.06	29	182.73	24	157.73	85
8. Amount Raised Locally/ADA 1942	Dep.	8	93.72	19	81.11	23	91.67	47
	Ind.	6	122.52	22	89.59	15	53.15	76
	P.V.	4	94.13	18	89.41	8	48.58	58
	Tax L	10	109.10	27	90.93	18	64.71	59
9. Growth Index—1952-62	Dep.	8	.66944	19	.67991	25	.68957	59
	Ind.	7	.69316	24	.67965	20	.61529	100
	P.V.	4	.68951	18	.65371	11	.67431	76
	Tax L	10	.68126	29	.68881	24	.66204	85
10. Growth Index—1942-62	Dep.	8	.35086	19	.30836	23	.33269	47
	Ind.	6	.38113	22	.33406	15	.21912	76
	P.V.	4	.32560	18	.30976	8	.25437	58
	Tax L	10	.36996	27	.32585	18	.29070	59
21. Average Teachers Salary	Dep.	10	$6580.80	21	$6441.70	29	$6349.21	72
	Ind.	8	7088.90	26	6353.00	22	6576.40	116
	P.V.	4	6497.70	20	6612.10	11	6455.10	81
	Tax L	11	7039.90	32	6478.60	28	6488.30	97
22. Beginning Salary	Dep.	10	4694.50	21	4630.50	29	4620.10	72
	Ind.	8	4970.00	26	4791.21	22	4767.70	116
	P.V.	4	4962.50	20	4752.10	11	4612.50	81
	Tax L	11	4884.10	32	4732.50	28	4713.60	97
23. Maximum Salary	Dep.	10	8913.80	21	8264.40	29	8215.90	72
	Ind.	8	9296.10	26	8659.70	22	8782.30	116
	P.V.	4	9200.00	20	8681.60	11	8531.30	81
	Tax L	11	9204.50	32	8478.60	28	8486.70	97
24. Salary on 10th Step with Masters	Dep.	10	7186.30	21	6900.10	29	6776.60	71
	Ind.	8	7440.10	26	7299.50	22	7212.80	116
	P.V.	4	7277.20	20	7279.21	11	6907.90	81
	Tax L	11	7333.10	32	7112.80	28	6895.00	97
25. Teachers/1000 ADA	Dep.	10	40.530	21	40.150	29	42.552	72
	Ind.	8	38.411	26	38.759	22	40.025	116
	P.V.	4	37.821	20	39.909	11	39.934	81
	Tax L	11	39.128	32	39.493	28	40.924	97
26. Guidance Counsellors/1000 ADA	Dep.	10	.97457	21	.80685	29	1.1048	71
	Ind.	8	.92714	26	.80863	22	.91513	114
	P.V.	4	.49693	20	.84762	11	.84911	79
	Tax L	11	.88621	32	.78112	28	1.0402	95
27. Librarians/1000 ADA	Dep.	10	.76985	21	.77587	29	.91402	71
	Ind.	8	.67261	26	.61223	22	.66800	114
	P.V.	4	.52428	20	.56204	11	.92973	79
	Tax L	11	.70687	32	.62362	28	.78307	95
28. Specialists from other Agencies/1000 ADA	Dep.	7	.60873	8	.51516	6	1.1262	23
	Ind.	2	.12819	2	.21879	4	.76709	16
	P.V.	2	.20993	1	.12984	2	.46295	13
	Tax L	5	.57296	3	.22206	3	.47511	13
29. Clerical Workers/1000 ADA	Dep.	10	4.7392	21	3.8915	28	4.4058	72
	Ind.	8	5.5575	26	4.6072	22	4.5659	114
	P.V.	4	4.1053	20	4.8492	11	4.8784	80
	Tax L	11	5.4363	32	4.6790	28	4.4676	95
30. % of total teachers with Bachelor degree	Dep.							
	Ind.							
	P.V.							
	Tax L							
31. % of total teachers with Master degree	Dep.							
	Ind.							
	P.V.							
	Tax L							
32. % of total teachers with Doctor degree	Dep.							
	Ind.							
	P.V.							
	Tax L							
33. % of degreed teachers of total teachers	Dep.							
	Ind.							
	P.V.							
	Tax L							
34. Lib-AV/ADA-1962	Dep.	9	6.4900	21	2.4455	28	2.1335	68
	Ind.	8	3.1654	24	3.1132	19	2.8244	109
	P.V.	4	2.4482	19	2.7633	10	4.0691	76
	Tax L	10	4.4284	30	2.8287	25	2.8365	93
35. Lib-AV/ADA 1952	Dep.	6	.90367	18	1.2524	23	1.6632	55
	Ind.	6	2.3940	20	1.4013	16	2.4879	87
	P.V.	4	1.9358	15	1.2682	10	2.2971	64
	Tax L	8	1.9040	24	1.3810	21	2.8400	73

1222 SCHOOL DISTRICTS
DEPENDENCE, FISCAL INDEPENDENCE, PUBLIC VOTE AND TAX LIMITATION

Size Group No. 4 *12,000-24,999 Pupils*		*Size Group No. 5* *6,000-11,999 Pupils*		*Size Group No. 6* *3,000-5,999 Pupils*		*Total*	
N	*Mean*	*N*	*Mean*	*N*	*Mean*	*N*	*Mean*
72	$377.12	110	$370.81	156	$360.30	401	$371.09
115	409.63	207	452.57	402	441.62	817	447.06
81	427.51	115	473.93	241	480.36	504	479.58
97	419.29	155	429.25	274	399.75	604	412.52
59	227.06	84	222.10	128	220.29	327	$225.45
100	242.46	180	261.79	309	270.74	689	264.27
75	237.90	98	270.12	195	285.46	426	274.33
85	236.33	132	258.99	220	252.32	505	250.16
48	94.01	71	88.87	97	96.45	269	$ 96.53
75	117.56	110	120.98	213	120.86	463	123.44
59	114.48	66	127.88	134	129.80	307	130.36
60	110.60	93	108.23	143	110.02	354	111.64
59	.60296	84	.60985	127	.63428	326	.62014
99	.57415	179	.59178	310	.62325	669	.59787
75	.56344	98	.59522	196	.59031	428	.58498
85	.56219	131	.61778	219	.64183	504	.61789
48	.24401	71	.23485	97	.27639	269	.25894
75	.28066	106	.27800	214	.27809	464	.28048
59	.26724	66	.28746	135	.26929	309	.27749
60	.27414	92	.26775	143	.28226	354	.27571
72	$319.82	110	$279.76	154	$272.47	398	$286.71
115	277.58	207	328.59	402	320.78	818	326.80
81	289.31	115	349.42	243	363.02	507	361.08
97	279.41	156	302.94	273	276.86	605	282.08
59	172.62	84	168.78	128	152.93	326	167.50
100	171.96	178	212.29	307	194.09	666	200.05
76	164.74	97	208.92	196	214.36	429	209.68
85	167.41	131	198.56	215	154.43	501	172.62
47	72.81	67	72.70	95	80.82	262	79.80
76	86.98	106	98.46	209	91.49	457	94.23
58	77.40	64	98.45	134	103.78	306	98.81
59	76.11	86	78.84	138	69.88	343	75.91
59	.64764	84	.62229	127	.16535	325	.63411
100	.61870	177	.66777	307	3.6158	665	.6121
76	.59138	97	.67813	196	.61025	429	.62259
85	.59477	131	.68164	215	12.025	501	5.5327
47	.27713	67	.27746	95	.27981	262	.28826
76	.32099	105	.36363	209	.35037	456	.34045
58	.28252	64	.39045	134	.38852	306	.35183
59	.28008	86	.33737	138	.27689	343	.30045
72	$6177.10	110	$5897.40	157	$5784.60	402	$5994.10
116	6510.20	208	6398.20	402	6296.60	820	6414.90
81	6574.40	115	6648.00	242	6621.20	506	6671.10
97	6511.00	156	6249.80	274	6046.66	606	6240.50
72	4571.90	110	4578.20	154	4551.80	399	4579.10
116	48.63.60	208	4903.90	404	4812.70	822	4857.50
81	4899.40	115	4941.00	243	4917.60	507	4524.30
97	4851.00	156	4765.20	274	4720.50	606	4759.70
72	7996.50	110	7837.10	154	7578.30	398	7852.90
116	8692.80	207	9007.40	400	8646.10	816	8829.60
81	8979.70	115	9280.40	241	9104.50	504	9190.20
97	8698.90	156	8449.70	273	8086.30	605	8349.70
71	6839.00	109	6627.50	149	6648.20	391	6720.10
113	7345.50	206	7543.50	394	7281.10	809	7384.80
81	7541.50	112	7638.20	239	7512.60	499	7552.50
97	7376.70	154	7197.10	265	7014.00	595	7131.10
72	42.306	110	43.823	157	44.055	402	43.324
116	42.323	208	44.673	402	45.287	820	44.722
81	42.283	115	45.403	242	46.324	506	45.532
97	42.141	156	43.754	274	43.430	606	43.093
71	1.0656	102	.99091	148	1.0368	383	1.0229
114	1.0157	197	1.2120	392	1.1995	704	1.1769
79	1.0983	110	1.2556	237	1.2879	491	1.2457
95	1.0632	144	1.1070	262	1.0695	578	1.0610
71	.88824	106	.85928	156	.95527	397	.90348
114	.66304	204	.79535	396	.93783	803	.86416
79	.75661	112	.85136	238	.99799	497	.92927
95	.75863	152	.75401	270	.90775	596	.82953
23	.67132	37	.49274	45	.68915	127	.63122
16	.56866	27	.52477	72	.85814	130	.76121
13	.65122	13	.33177	46	.84526	83	.73848
13	.50644	27	.32215	60	.64878	113	.54548
72	3.5369	108	3.3794	154	3.3687	396	3.5526
114	4.7517	207	4.6394	399	4.4447	814	4.6208
80	4.9115	114	4.9073	240	4.6789	502	4.8570
95	4.6334	154	4.2649	272	4.2192	600	4.3661
						393	98 %
						805	98.5
						497	98
						594	98.3
						393	98
						806	98.65
						497	98
						595	98.5
						149	37
						329	40
						221	44
						213	35
						394	98
						807	98.77
						499	99
						597	98.84
68	3.2286	107	2.9672	154	3.4872	390	$ 3.22
109	3.2888	199	4.1067	391	6.0496	788	4.96
76	3.2718	108	4.2069	236	7.9131	486	5.89
93	3.3872	151	3.7882	269	4.7290	586	4.09
55	1.1770	83	1.4046	120	1.6926	308	1.49
87	1.6052	149	2.0031	281	1.8356	588	1.83
64	1.6272	80	2.1720	180	1.6971	379	1.77
73	1.6049	115	2.0046	197	1.7210	445	1.82

with respect to a few of the measures is not apparent except in districts smaller than that.

This circumstance, it should be noted, could be the result of some factor or combination of factors associated with peculiar local circumstances. Thus, the critical question to be answered is, "Do the same relationships exist when the influences of key factors of local circumstances are computed?" The answer to this question should soon be available. A program is now being written for an analysis of covariance with multiple covariates in order to compute the influence of size, wealth, population characteristics, characteristics of school board members, and fiscal dependence and independence. The results of this work will be reported when it is completed.

In the meantime it is the judgment of this writer that the "peculiar local circumstance" which in the largest districts appears to render fiscal independence and public vote ineffectual in comparison with other modes of school board control is in this instance the factor of extreme size itself. An examination of the table will show that for the two largest size groups there is little difference in net current expenditure whether we examine the means of the independent or dependent districts, the public vote or the tax limit districts. However, at Size Group 3 (comprising districts with enrollments of 25,000 to 49,999 pupils) the superiority of fiscal independence begins to show itself and continues to do so for the remainder of the smaller size groups. Below Size Group 3 the differences in the means is significant at the .05 level, or better, in each size group. At the level below 25,000 pupils public vote districts are clearly in the ascendancy in terms of their financial provision for the educational program. Further examination of the figures (not shown in the table) reveals that this situation has been historical, going back as far as 1942, the beginning of the current period of economic growth and price increase.

A similar effect may be noted in the amount raised locally per pupil, except that superiority of the fiscally independent districts does not appear above Size Group 5, comprising districts with enrollments of less than 12,000 pupils. The independent districts do better than the dependent districts on teachers' salaries in every size group below Size Group 2. In guidance counselors per thousand pupils, superiority of districts with fiscal independence and public vote is evident at Size Group 4 and below, comprising districts with enrollments up to 25,000 pupils. Expenditures for books, library supplies, and audio-visual aids exhibit a similar phenomenon. In all except the two top size groups the independent districts are superior, by a considerable margin among the smaller districts.

One observation that can be made relative to these data is that they tend to substantiate the conclusions of previous observers that excessive school district size reduces the effectiveness of administration in developing and maintaining an adequate program of education. What the present data suggest is that school boards in the giant cities find themselves hampered in their fiscal policies irrespective of the manner of budget approval. This is partly because of the competition afforded by general government as the complexities of the tasks imposed upon general government increase with increasing size.[8] The fiscally independent districts seem to be able to create and maintain a more wholesome fiscal atmosphere for schools than do the dependent districts, but mainly in districts that do not exceed a critical size. The point of critical size varies somewhat depending upon the factor in question. In terms of amount raised locally critical size appears to be about 12,000 pupils, or a community of some 50,000 to 60,000 population. In terms of special staffing, like guidance counselors per thousand pupils, critical size appears in the neighborhood of 25,000 pupils—indicating a community of 100,000 to 125,000 population. In terms of net current expenditure, the most important single financial statistic, critical size shows up at 50,000 pupils—when the community would number some 200,000 to 250,000 persons. As for the community of less than 50,000/60,000 population, the limit of optimum size suggested by Swanson, all the advantages of fiscal independence of the school board and public vote on the budget are realizable here; and, conversely, fiscal dependence and/or tax limitation restrict it as though it were a district many times larger.

[8]See IAR RESEARCH BULLETIN, "Lost Wealth of the City School District." Vol. 5, No. 1, November, 1964.

Research Bulletin

Devoted to research carried on by the Institute of Administrative Research and related groups, review of results, report of work in progress, discussion of theory and design, and implications for educational policies

Published in November, February and May by the Institute of Administrative Research

Subscription rate: $1.00 per year

In this Issue