

MEMORANDUM

Date: 07 February 2001
Re: Public school education in Puerto Rico

Less is spent per public school student on Puerto Rican students than for the students of any US state

Table 1

Puerto Rico summary data and rankings (NCES, 1996-97)

	Measure	Rank
Public school expenditures	\$1,833,066,282	35
Public school expenditures per pupil	\$2,962	52
Public school expenditures	\$1,178,821	49
Public school students	618861	28
Public school teachers	39743	25
Public student / teacher ratio	15.6	19
School administrators	2421	30
School administrators per teacher	0.061	48
Public school administrators per student	0.004	42
Public schools	1555	21
Public students per school	397.98	37

This is a preliminary comparison of Puerto Rico's public school system including size and expenditure in relation to those of US states and the District of Columbia. The aim of this preliminary comparison is to determine if we want to investigate further the positioning of public schools in the broad range of Puerto Rican infrastructure.

The statistics presented here are directly translated or calculated from 'State Profiles of Public Elementary and Secondary Education, 1996-97' produced by the National Center for Education Statistics (available at <http://nces.ed.gov/pubs2000/stateprofiles/index.html>). The majority of NCES statistics are based upon the US Department of Education's Common Core of Data (96/97). Thus this is a snapshot of the 1996-1997 fiscal year. Public school education is compared by student population, expenditure, teaching and administration, as simple measures of size, scope, efficacy and efficiency respectively (see below for suggestions on further investigation of these).

The tables over page show comparisons between Puerto Rico's public schools including:

- Kentucky, Mississippi, West Virginia, North Dakota and South Dakota (as they are amongst the poorer of US states and as such have been used as comparison points in Hex papers)
- US states combined
- Peer states according to raw values / rankings
- Top and bottom ranking states (to show range)

As both Puerto Rico and Washington DC are included in the rankings, 52 is the lowest possible ranking.

Commentary on Puerto Rico rankings

See over page for tables incorporating each of these measures – with full details of US combined, peer states, comparison states and states at either end of ranges.

Preliminary assessment of primary weakness: 1. Expenditure per public school student

Preliminary assessment of strengths: 1. Small administration
2. Student / teacher ratio

School population

- Puerto Rico has the 28th largest school pop, below Kentucky but above the other poor states with which we compare the commonwealth
- Oklahoma and Oregon are peers on population

Students per school

- On average, Puerto Rico has 120 less students per school than the US average of 517 (range of school sizes has not been analyzed)
- Puerto Rico has fewer students per public school than 36 US states
- Minnesota and Missouri are peers on students per school with the three having between 390-400 students per school
- Across the poorer states, Mississippi and Kentucky have more students per school than Puerto Rico but West Virginia and the Dakotas have fewer students per school

Expenditure

- Based on the NCES 1996-97 the figures are clear, Puerto Rico receives less per pupil than any other state - *these figures could be checked against others and across time*
- \$2,962 or 49 % the US average of expenditure per student (\$5,925) is spent on Puerto Rican students
- Puerto Rico's nearest peer, Utah, spends almost \$800 more on per public school student

Teachers

- Puerto Rico has more teachers per student on average (15) than the average of US states (17) and more than 32 of those US states
- Peer states are New Hampshire and Texas
- West Virginia and the Dakota's have fewer students per teacher than Puerto Rico but Kentucky and Mississippi have more students per teacher than Puerto Rico
- NCES was not provided with figures on Puerto Rican teacher salaries and therefore we are not able to make a judgment as to whether Puerto Rico's low student teacher ratio is a function of teacher affordability or other conditions (eg. Union strength, parliamentary belief in the value of teachers over administrators...)

Administrators

- Puerto Rico's administrator to teacher ratio is lower than 47 US states
- Peer states are Ohio and New York
- Puerto Rico has less administrators/teachers and students for the Dakotas, Mississippi and West Virginia. Kentucky, ranked lowest at 52nd, is the only 'poor state' with a lower ratio than Puerto Rico
- Administrator per teacher is a common point of comparison. As Puerto Rico ranked very well on this (48th), I tested the less common, administrators to students, where-by Puerto Rico's ranking did rise (to 42nd) however that is still significantly low in comparison to US state figures.
- Low administrator to teacher and student ratios suggests that expenditure is put towards teachers rather than administrators, however analysis of budget breakdowns would be necessary to determine that.

See over two pages for full comparison tables.

Further investigation

A comparison across time would require cross-referencing with US and Puerto Rico as well as request of data in appropriate form from the NCES. Data that would allow comparison against 1987-88 is likely to be available. It would also be useful to analyze if the new Puerto Rico government is increasing and/or altering the mix of education expenditure.

Additional data analysis that could be useful, if further investigation is a priority:

- Could not find in this initial search, uncertain of availability
 - Amount and condition of physical facilities (information available on US state schools)
 - Teacher salaries in Puerto Rico (information available on US state schools)
 - The number of students in private rather than public schools (" ")
 - Breakdown of budget / expenditure allocations
- Could not find in this initial search, appear to not appear to be collected or available
 - Common test results
 - High school drop out rate

Table 2

School population and size (NCES, 1996-97)

	Students in	Rank	Public	Rank	Students	Rank
	public schools	Students in	schools	public	per school	Students
		public schools		schools		per school
United States	45611046.00	—	88223	—	517.00	—
California	5686198	1	7984	1	712.20	4
Florida	2242212	4	2801	3	800.50	7
Tennessee	904818	16	1565	20	578.16	14
Missouri	900517	17	2291	9	393.07	38
Minnesota	847204	19	2116	12	400.38	36
Kentucky	656089	25	1407	26	466.30	27
Oklahoma	620695	27	1828	18	339.55	42
Puerto Rico	618861	28	1555	21	397.98	37
Oregon	537854	29	1222	31	440.14	30
Mississippi	503967	31	1007	35	500.46	23
Iowa	502941	32	1552	22	324.06	43
West Virginia	304052	37	869	37	349.89	41
South Dakota	143331	46	832	38	172.27	52
North Dakota	120123	48	609	43	197.25	50
Delaware	110549	49	183	52	604.09	9
Dist. of Columb	78648	52	184	51	427.43	33

(fault in program: changes spelling of 'public schools' in columns 2 and 3)

Table 3

Public school expenditure (NCES, 1996-97)

	Total	Rank	Expenditure	Rank	Expenditure	Rank
	Expenditure	Total	per pupil	expenditure	per school	Expenditure
		Expenditure		per pupil		per school
United States	\$270,245,447,550		\$5,925		\$3,063,209	
New Jersey	\$11,963,995,008	6	\$9,744	1	\$5,249,669	2
New York	\$24,237,691,775	2	\$8,525	3	\$5,809,610	1
West Virginia	\$1,847,419,952	34	\$6,076	16	\$2,125,915	37
Nebraska	\$1,707,423,016	37	\$5,848	23	\$1,223,082	48
Montana	\$902,320,587	46	\$5,481	29	\$1,011,570	50
California	\$29,898,029,084	1	\$5,258	35	\$3,744,743	10
Kentucky	\$3,382,138,795	26	\$5,155	36	\$2,403,794	32
North Dakota	\$577,551,384	52	\$4,808	41	\$948,360	51
South Dakota	\$627,073,125	50	\$4,375	49	\$753,694	52
Mississippi	\$2,035,522,713	33	\$4,039	50	\$2,021,373	39
Utah	\$1,822,694,796	36	\$3,783	51	\$2,456,462	30
Puerto Rico	\$1,833,066,282	35	\$2,962	52	\$1,178,821	49

Table 4

Teachers with student ratios (NCES 1996-97)

	Number of	Rank number of	Student-teacher	Rank
	Public school	Public school	ratio	Student-teacher
	teachers	teachers		ratio
United States	2667419		17.10	
<i>Maine</i>	15551	39	13.7	1
<i>West Virginia</i>	20888	35	14.6	8
<i>South Dakota</i>	9625	46	14.9	11
<i>Dist. of Columbia</i>	5288	52	14.9	12
<i>North Dakota</i>	7892	47	15.2	15
<i>Texas</i>	247650	2	15.5	18
Puerto Rico	39743	25	15.6	19
<i>New Hampshire</i>	12692	42	15.6	20
<i>Oklahoma</i>	39568	26	15.7	22
Kentucky	39331	27	16.7	30
Mississippi	29293	32	17.2	38
<i>Arizona</i>	40521	24	19.7	48
<i>California</i>	248818	1	22.9	51
<i>Utah</i>	19734	38	24.4	52

Table 5

Administrators with student and teacher ratios (NCES 1996-97)

Rankings on the figures below have been calculated according to whole ratios – only rounded ratios are presented here, however the rankings remain consistent with the original.

	Number of	Rank	Administrators	Rank	Administrators
	administrators	Number of	per teacher	Administrators	per student
		administrators		per teacher	
United States	204282.00		0.077		0.004
<i>Dist. of Columbia</i>	772	48	0.146	1	0.010
North Dakota	913	44	0.116	4	0.008
<i>Oregon</i>	2703	29	0.101	7	0.005
Mississippi	2839	27	0.097	8	0.006
<i>South Dakota</i>	862	46	0.090	17	0.006
<i>West Virginia</i>	1702	37	0.081	25	0.006
<i>Wyoming</i>	538	52	0.080	28	0.005
New Hampshire	965	43	0.076	35	0.005
<i>California</i>	17811	1	0.072	40	0.003
<i>Pennsylvania</i>	6947	9	0.065	45	0.004
<i>Ohio</i>	6667	10	0.061	47	0.004
Puerto Rico	2421	30	0.061	48	0.004
<i>New York</i>	10898	3	0.059	49	0.004
<i>Arizona</i>	2361	31	0.058	50	0.003
Kentucky	1903	34	0.048	52	0.003