

Submission

to

Senate Employment, Workplace Relations and Education
References Committee

Inquiry into Commonwealth Funding for Schools

Submission no: 7C

Received: 4/08/2004

Submitter: Mr Mark Drummond

Organisation:

Address: 5 Loddon Street
KALEEN ACT 2617

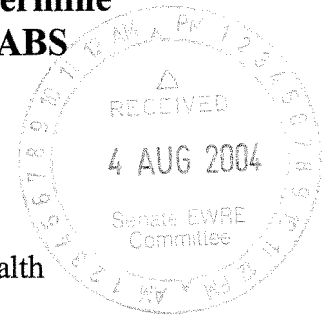
Phone: 02 6255 0772

Fax: 02 6255 0773

Email: markld@ozemail.com.au

Further Illustration of Deficiencies in the Process Used to Determine SES Scores for Non-Government Schools – Based on 2001 ABS Census Data.

Working Paper by Mark Drummond, as at 4 August 2004



My original submission (numbered 7) to the Senate Inquiry into Commonwealth Funding for Schools (as at http://www.aph.gov.au/Senate/committee/eet_ctte/schoolfunding/submissions/sub007.pdf) includes as follows on page 5:

families with kids attending [a particular non-government school] X would contribute about 8% to CD aggregate SES scores (8% being 4 as a percentage of 50); families with kids attending non-government schools *other than* X would contribute about 32% to such CD aggregate SES scores (16 as a percentage of 50); and families attending government schools only would contribute about 60% to such CD aggregate SES scores (30 as a percentage of 50).**

The SES score determination process is actually even worse than is indicated by this above statement, because the above statement assumes that all data used to determine SES scores is data for families with children in at least some K-12 (i.e. Kindergarten [or equivalent] to Year 12) schools. But this is *not nearly* the case. The formula used to determine SES scores for schools is as follows:

$$\frac{A}{3} + \frac{B}{3} + \frac{C}{6} + \frac{D}{6} \text{ OR, equivalently: } 0.333A + 0.333B + 0.167C + 0.167D \dots[1]$$

where

A is the average value from step 4 for the SES scores for the Occupation dimension;

B is the average value from step 4 for the SES scores for the Education dimension;

C is the average value from step 4 for the SES scores for the Household Income dimension; and

D is the average value from step 4 for the SES scores for the Household Income based on Families with Dependent Children dimension.

The above formula [1] above is as obtained from the DEST website as lowermost below here. The main point to note here is that, out of A, B, C and D above, only D is confined to "Families with Dependent Children". Components A, B and C – which contribute a 83.3% weighting towards SES scores, are based on households *without regard for whether such households have children in them or not*, let alone children attending a K-12 school, let alone a non-government school ... let alone the particular non-government school for which the SES score is being determined!! And even the 16.7% weighted component D here (based on families with dependent children) will include at least some data for families whose children do not attend K-12 schools (i.e. babies and pre-school infants and/or dependents studying at TAFE or University, for example).

So what percentage or fraction of Australian households have K-12 school children in them?

The Australian Bureau of Statistics 2001 Census Basic Community Profile (Catalogue No. 2001.0 – available free of charge via www.abs.gov.au) hosts Tables including as follows:

Table B31 states that there were 6,744,795 households in total, of which 4,866,031 (72.1%) were family households

Table B17 shows that there were 4,936,828 families in total, of which:

- 1,764,167 (35.7%) were "couple families without children"
- 2,321,165 (47.0%) were "couple families with at least one child"
- 417,043 (8.45%) were "couple families with non-dependent children only"
- 762,632 (15.4%) were "one parent families with at least one child"
- 232,663 (4.71%) were "one parent families with non-dependent children only"

So of the 4,936,828 families in total, **only 2,434,091 (i.e. 49.3% of all families) have dependent children** (i.e. children under 15 and/or 15-24 year old dependent students). This 2,434,091 figure is found as 2,321,165 minus 417,043 PLUS 762,632 minus 232,663 (noting figures as above).

Key Findings and Explanations Here

Whereas Table B17 of ABS Cat. 2001.0 states that there were 4,936,828 families in total, Table B31 states that there were 4,866,031 family **households**. This discrepancy (4,936,828 MINUS 4,866,031 equals 70,797, which is 1.45% of 4,866,031). So this is a fairly minor discrepancy of no real gravity here.

Of 6,744,795 households in total, only 4,866,031 (72.1%) were family households, but only 49.3% of Australian families have children under 15 or dependent students aged 15-24. Now 49.3% of 72.1% equals 35.6%.

So only 35.6% of Australian households have children under 15 or 15-24 year old dependent students.

BUT (and this is of yet further significance), among households with dependent children/students, some of these households would be absent of children attending schools (i.e. Kindergarten [or equivalent] to Year 12, or K-12, schools). All up then it is likely that less than one-third of all households host K-12 school kids. **For present purposes it shall therefore be estimated that approximately 30% of all Australian households host at least one K-12 school child (this is bound to be close to the mark - certainly to the nearest 10%).**

So this 30% figure, along with equation [1] above, and the discussion that followed this equation, shows clearly that families with K-12 school children only contribute about 30% of the data used to determine SES scores for schools – the remaining 70% being contributed by households absent of K-12 school children. So the 8% figure in

the quote presented uppermost above (from my original 21 June Senate Inquiry submission) should be reduced to about 30% of this 8% figure – that is, to about 3%!

So we can approximately conclude then that **SES scores for non-government schools typically reflect data based on the actual families of the actual kids at these actual schools with a weighting of just 3% or so, with the other 97% or so of data being contributed by households and families with no substantive connection whatsoever with the actual school whose SES score is being determined.**

What an utterly astonishing state of affairs this is!

EXTRACT FROM DEST WEBSITE FOLLOWS BELOW.

Regards,

Mark Drummond
4 August 2004

EXTRACT FROM DEST WEBSITE

From <http://schoolgrg.dest.gov.au/> (see '**Guidelines for calculating a school's SES score**' under 'SES Info') there is as follows describing how SES scores for schools are determined. The main point here is the fact that only the one-sixth weighting based on 'Families with Dependent Children' ensures that the data is based on families with children – the other five-sixths contribution to SES scores is from data which includes households/people without any kids at all, let alone school age kids, let alone kids at non-government schools, let alone kids attending the school for which the SES score is being determined!! See especially the formula with the A, B, C and D in it in Step 5 below)

SCHEDULE Guidelines for determining the SES score of a school

1 Application of Guidelines

These Guidelines apply to any determination of an SES score for a school for the purposes of the Act.

2 Definitions

In these Guidelines, the following definitions apply:

Act means the *States Grants (Primary and Secondary Education Assistance) Act 2000*;

Australian Bureau of Statistics means the Australian Bureau of Statistics established under section 5 of the *Australian Bureau of Statistics Act 1975*;

calendar year means the 2000, 2001, 2002, 2003 or 2004 calendar year;

CD number, for a CD, means the number attributed to the CD by the Australian Bureau of Statistics for the purposes of the Census;

Census means the 1996 Census of Population and Housing conducted by the Australian Bureau of Statistics;

Census Collection District (or **CD**) means an area designated by the Australian Bureau of Statistics as a Census Collection District for the purposes of the Census;

geocoding, for a student residential address included in a statement of addresses for a school, means the process of assigning that address to a CD;

school means a non-government school;

SES dimension means any of the following dimensions:

- (a) Occupation;
- (b) Education;
- (c) Household Income;
- (d) Household Income based on Families with Dependent Children;

SES dimension score, for a CD, means the number, rounded to 4 decimal places, derived from data collected by the Australian Bureau of Statistics for the purposes of the Census and shown in the column *SES dimension score* for an SES dimension opposite the CD number for that CD shown in the column *CD number* in the document entitled *Funding Arrangements for Non-Government Schools 2001 – 2004: SES Dimension Scores for Census Collection Districts (CDs) based on the SES Index for General Recurrent Grants Funding* published by the Department;

statement of addresses, for a school, means a statement:

- (a) that contains student residential addresses for the school for the calendar year specified in the statement; and
- (b) that is provided by the approved authority of the school to the Department;

student residential address, for a school, means the residential address of a student receiving primary education or secondary education at the school other than a student:

- (a) who is an overseas student; or
- (b) who is receiving primary distance education or secondary distance education at the school.

3 Geocoding of students' residential addresses

Each student residential address contained in the statement of addresses for a school is to be geocoded unless it is not reasonably practicable to geocode that address.

4 Method to be followed in determining the SES score for a school

Work out the SES score for a school using the following method statement:

*Method
statement*

- Step 1* Set out opposite each geocoded student residential address in the statement of addresses for the school, the applicable CD number for that address.
- Step 2* Where a CD that is listed as a result of step 1 has one or more SES dimension scores, set out opposite the CD number the SES dimension score applicable to each such dimension for the CD.
- Step 3* Total the SES dimension scores set out in step 2 for each SES dimension for the school.
- Step 4* Divide the result of step 3 for each SES dimension by the number of geocoded student residential addresses for which there is an SES dimension score for that dimension. The average values are to be rounded to 4 decimal places, with rounding up if the fifth decimal place is 5 or more.
[Note: If a geocoded student residential addresses does not have an SES dimension score for that dimension it is not counted for the purpose of arriving at an average value for the dimension.]
- Step 5* Apply the resulting average values from step 4 to the following formula to produce a raw SES score. The resulting raw SES score is to be rounded to 4 decimal places, with rounding up if the fifth decimal place is 5 or more:
- $$\frac{\underline{A} + \underline{B} + \underline{C} + \underline{D}}{3 \quad 3 \quad 6 \quad 6}$$
- where:* **A** is the average value from step 4 for the SES scores for the Occupation dimension;
B is the average value from step 4 for the SES scores for the Education dimension;
C is the average value from step 4 for the SES scores for the Household Income dimension; and
D is the average value from step 4 for the SES scores for the Household Income based on Families with Dependent Children dimension.
- Step 6* Round the result of step 5 to a whole number, with rounding up if the first decimal place is 5 or more, to produce the SES score for the school.