

ACT Government submission to the Review of the socio-economic status score methodology

Summary

The Socio-economic Indexes for Areas (SEIFA) currently used by the Australian Government Department of Education and Training to calculate Socio-economic status (SES) score for determining the capacity of the school community to support its school significantly misclassifies SES at the individual level. The ACT has one of the greatest proportions of highly socio-economically diverse neighbourhoods mainly due to the spread of public housing throughout the Territory. Therefore, the family characteristics of students attending a non-government school may be materially different to, and not representative of, other residents within the same Statistical Area 1 (SA1) used for the SEIFA based calculation. The ACT Government has commissioned the ABS to develop a Socio-Economic Index for Households (SEIFH) data set using 2016 Census data. The SEIFH will be based on occupied private dwellings. The SEIFH measure allows for households to be identified as advantaged or disadvantaged based on the characteristics of the house and the people living within it. The development of SEIFH opens the possibility of the development of an SES index based on the SEIFH scores for households with children attending non-government schools. The use of household-level data would then provide the basis for determining the capacity of the particular school community to contribute to the recurrent costs of a school.

Introduction

The SES score methodology and application to determine capacity to contribute are specified in the Australian Education Act 2013 and Australian Education Regulation 2013. The Australian Government has commissioned the National School Resourcing Board (the Board) to conduct a review of the SES score methodology that has been in-place since 2001 and to consider the appropriateness of the use of SES scores in assessing the capacity of a non-government school community's ability to contribute to the recurrent costs of their school; and to make recommendations on alternative measures and/or changes to ensure confidence in the methodology utilised.

The ACT Submission to the Board addresses the strengths and weaknesses of the current SES measure and takes account of the extent and distribution of ACT specific socio-economic circumstances, along with a consideration of more direct measures/ alternative methodologies for calculating the SES.

The choice of model used for any SES calculation is an important issue for the ACT Government. When applied in the ACT, area based measures of SES used in education, such as the current model used by the Australian Government Department of Education and Training, have the capacity to significantly misclassify the socio-economic status of individuals. Despite enjoying one of the lowest levels of overall relative disadvantage in Australia, the ACT has one of the greatest proportions of highly socio-economically diverse neighbourhoods and, as an aggregate area-based measure, SEIFA only captures a fraction of the true level of disadvantage being experienced by school students in this jurisdiction.

The ACT Government considers that a model using the characteristics of individuals will more accurately determine the capacity of a particular school community to support the recurrent school expenditure and to more efficiently allocate public funding to non-government schools.

Submission questions

- 1. What are the strengths and limitations of the current Socio-economic Status (SES) methodology that is used to determine the capacity of a school community (school, family, and parent) to contribute to the recurrent costs of the school? Please provide any supporting evidence.**

Response

The current Socio-economic status score (SESS) is an area based measure used by the Australian Government Department of Education and Training to determine the capacity of the school community to financially support its school, rather than to explain differences in educational outcomes. As such, it is currently used to determine a school community's capacity to financially contribute towards the operating cost of a nongovernment school and includes dimensions of parental education and occupation and of household and family income in its construction.

Area based measures have some advantages, including that the data from the Census of Population and Housing used to construct them is nationally consistent, and can draw on a broad range of potentially relevant variables that would be sensitive for schools to collect from parents, including information on family or household income.

However, a range of sources of error can impact the accuracy of Census of Population and Housing data, including respondent error, processing error, partial or non-response and undercount. Research based on Longitudinal Surveys of Australian Youth (LSAY) data showed that the use of Socio-economic Indexes for Areas (SEIFA) greatly misclassifies SES at the individual level, with almost 40 per cent of individuals wrongly classified as high or low SES *Lim, P. and Gemici, S. (2011)*.

The Socio-Economic Indexes for Individuals (SEIFI) is a multi-dimensional measure of relative socio-economic disadvantage specifically designed by the Australian Bureau of Statistics (ABS) to measure an individual's relative access to material and social resources based on personal attributes such as income, educational background, or housing status using information from the 2006 Census of Population and Housing.

A report prepared by the ACT Government, *Detecting Disadvantage in the ACT (ACT Government 2012)* compared the SEIFA and SEIFI indexes and demonstrated that the averaging effects of the various geography based SES methodologies can mask the relative disadvantage of individuals, when used as a proxy for individual diversity of socio-economic circumstances within the Australian population.

The effects of this ecological fallacy are particularly acute in the ACT, compared with other jurisdictions, largely due to the spread of public housing throughout the Territory avoiding disadvantaged suburbs. As such, the likelihood of being compared with truly "like" schools is

far lower for the ACT. When analysing disadvantage in the ACT at the suburb level, for example, the SEIFA IRSD index only identified 0.2 percent of the total ACT population as falling into the most disadvantaged quintile of Australians. By contrast, the SEIFI data indicated that 12.6 percent of ACT residents aged 15 to 64 fall into that same cohort.

The inaccuracies of SEIFA in the ACT exacerbate a significant limitation of the current SES methodology – that is, that the family characteristics of students attending a non-government school may be materially different to, and not representative of, other residents within the same Statistical Area 1(SA1) used for the SEIFA based calculation. As a result the calculated school SES score will not accurately reflect the capacity of a school's parents to contribute financially towards a school.

2. What refinements or alternative methodologies could be considered to improve on the current SES measure, including how frequently should measures be updated?

Response

Socio-educational advantage (SEA) quarters

Parent education and occupation data is collected on enrolment for all students in government schools and across most non-government schools. For schools that don't collect parental background data at enrolment, most have data available for students who have sat NAPLAN over a number of years.

In 2014 the Education Council agreed that work should be undertaken in 2015 to investigate the best available measure to support the Low SES loading component of school funding by considering the various measures of socio-economic status in the schooling sector. The outcome of the project was the paper, *Measuring educational disadvantage for school funding*, was provided to Senior Officials in December 2015.

The paper identified that a direct measure using socio-economic advantage (SEA) quarters based on individual student information relating to parent occupation, school education and non-school education was the best available to support the low SES loading from 2018. This measure is based on information directly relevant to a student and school's SES and more closely aligned with differences in school-level educational outcomes (measured here by NAPLAN results) than other measures such as the SESS.

However, while the SEA measure is highly aligned with school educational performance, the measure has limitations as to how it could be used to determine the capacity of a school community to contribute to the recurrent costs of the school.

The ACT Government low SES needs based loading model

The model developed for ACT public schools is similar to the Socio-educational advantage (SEA) quarters model in using parental education and occupation to derive an index of relative need. The Student Family Education and Occupation Index (SFI) – combines parental education and occupation into a composite variable at the school level.

A value of 0 was assigned to students with university-educated parents and a value of 1.0 to students with parents with less than a year 12 level of education. A school ratio was then

derived by assigning a value for each student, summing the values and converting the weighted enrolment into a ratio by dividing by the total number of valid responses. The result is a value lying between 0 (least disadvantaged) and 100 (most disadvantaged) for each school. Missing data is not given a weighting in the model.

For parental occupation, a value of 0 was assigned to students with parents engaged in professional/ senior manager occupations and a value of 1.0 to students with parents/carers in the 'Not in paid work' category. The same methodology used for parental education was applied to parental occupation.

Socio-Economic Index for Households (SEIFH)

The ACT Government has commissioned the ABS to develop a Socio-Economic Index for Households (SEIFH) data set for all Australia using 2016 Census data.

The SEIFH will be based on occupied private dwellings. Population classified as migratory, offshore or shipping will be excluded. A household measure allows for households to be identified as advantaged or disadvantaged based on the characteristics of the house and the people living within it.

Due to partial non-response from some Census respondents, missing data and how it is treated is an issue in creating a SEIFH. Households with high numbers of non-response will be removed; imputation will be considered to address remaining instances of non-response.

The development of SEIFH opens the possibility of the development of an SES index based on the SEIFH scores for households with children attending non-government schools. The use of household-level data would target the measure to the capacity of the particular school community to contribute to the recurrent costs of a school.

It should be acknowledged that currency of the data may be an issue with such a measure. The SEIFH would be available two years after each Census of Population and Housing (the same as the current SEIFA indices). It would be possible that the family identified at Census may no longer live in a particular household, with the data losing currency the further out from the Census the index is applied.

3. Are the guiding principles appropriate to assess alternative approaches or are there other principles that should be considered?

No Response

References

Lim, P. and Gemici, S. (2011) *Measuring the socioeconomic status of Australian Youth*

ACT Government. (2012). *Detecting Disadvantage in the ACT: Report on the comparative analysis of the SEIFI and SEIFA indexes of relative socio-economic disadvantage in the Australian Capital Territory*. Canberra: ACT Government.

Making submission:

<https://submissions.education.gov.au/Forms/ses-review-submissions/pages/index>
<https://submissions.education.gov.au/Forms/ses-review-submissions/pages/form>