

EXPLAINING ICSEA

What is ICSEA?

The Index of Community Socio-Educational Advantage (ICSEA) is a measure that enables meaningful comparisons to be made across schools. It has been developed specifically for the *My School* website and measures key factors that correlate with educational outcomes.

ICSEA uses Australian Bureau of Statistics (ABS) and school data to create an index that best predicts performance on NAPLAN tests. The variables that make up ICSEA include socio-economic characteristics of the small areas where students live (in this case an ABS census collection district of about 200 houses), as well as whether a school is in a regional or remote area, and the proportion of Aboriginal students enrolled at the school.

School ICSEA values are constructed from SES data obtained by matching enrolled student addresses to the census collection districts (CCD) in which they are located, and then allocating the census district values to the addresses.

The relevant socio-economic status characteristics of the CCD in which each student at a school lives are aggregated to the school level. The consolidated school level SES data, as well as data about the remoteness of a school and the proportion of Aboriginal students at the school, contribute to the ICSEA calculation.

It is important to note that the index is constructed from socio-educational elements over which the school has very little control, for example average income, level of education, and types of employment for the households of students enrolled in the school. These factors can predict about 62% of primary and 56% of secondary school performance. When the additional two elements of remoteness and percentage of Aboriginal students coming to the school are included, this figure increases to about 68% for primary schools and 59% for secondary schools.

This means that there is about 30% of the variance in outcomes for primary schools and about 40% for secondary schools that the school can influence. These are the within-school factors over which the school has significant influence such as the quality of the pedagogy; quality of professional learning; leadership; resource sharing; and providing professional feedback to teachers.

To ensure that the *My School* website makes fair comparisons between schools, the ICSEA values for government schools were checked with State and Territory governments. On the basis of feedback, ICSEA values were revised for situations in which schools had a student population with social and economic characteristics that were not well reflected in ABS census collection district data.

More specific information about the calculation of the ICSEA is available in the ICSEA Technical Paper on the *My School* website (www.myschool.edu.au).

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Why was ICSEA constructed in the way that it was?

The aim in constructing the Index of Community Socio-Educational Advantage (ICSEA) was to construct a measure which was the best possible predictor of school NAPLAN outcomes using data which is available for all Australian schools. The NAPLAN outcomes are used as the school performance measure because they provide the only universally available school performance data.

Some jurisdictions, NSW for example, already hold information about parent occupations and education levels collected when students enrol. It is possible that this data may be used for generating ICSEA values in the future when it is available from all jurisdictions.

Why were changes made to ICSEA for some schools?

The technique used to construct the ICSEA scale inevitably results in anomalous values for some schools. This is most likely to be the case for schools with small numbers of student addresses and for schools drawing their enrolments from small census collection districts with socio-economically varied populations. This most often occurs with schools in remote areas.

Because of the likelihood of such anomalous values occurring, the draft ICSEA values were sent out to the various jurisdictions to be reviewed. Most jurisdictions have their own school SES measures derived from census and or enrolment data against which they could compare the draft ICSEA values. The draft ICSEA values for 591 schools in Australia (6.2%) were modified at the request of jurisdictions.

There were also some schools for which there was no geo-coded address data available at all. Jurisdictions were asked to provide ICSEA estimates for these schools.

The draft ICSEA values for all schools were assessed against SES measures constructed from data collected directly from parents when they enrolled their children in school. While a number of draft ICSEA values were changed on the basis of this comparison, those that were not changed were in line with the data collected from parents.

How are the quartiles calculated?

The data used to allocate students to the SES quartiles is the same data used to calculate the ICSEA values. All the census districts in Australia were divided into four groups - low ICSEA though to high ICSEA. The quartile data shows the proportion of a school's students living in each of the four groups of census districts.

It is important to note that the lowest quartile (25%) covers a very wide range of disadvantage. If a particular school has a significant percentage of students clustered at the lower end of the quartile, then this school is likely to be serving a very disadvantaged community.

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Why does my school's ICSEA value look so high?

The ICSEA is a national, rather than state, scale of relative socio-educational advantage. Having the opportunity to make comparisons across Australia is new for all schools. It may be difficult for members of a school community to adopt an Australia-wide frame of reference when assessing the validity of their school ICSEA value.

NSW schools which may appear relatively disadvantaged within their own local context may not be nearly as disadvantaged when viewed against Australian schools as a whole.

The average ICSEA value for all NSW schools is 17 ICSEA points above the average ICSEA value for schools throughout the remainder of Australia.

Why are NESB and special needs enrolments not a factor in ICSEA?

The ICSEA scale was constructed using Australian Bureau of Statistics Census data, Aboriginal enrolment data and community remoteness. It has been designed to provide a measure of the communities that schools are serving rather than a measure of the schools themselves. Hence it does not include information about numbers of students with special needs or academic performance levels.

One of the variables which was tested for inclusion in the ICSEA index was the percentage of people in school communities who 'do not speak English well'. However, this variable was found not to have a statistically significant correlation with school outcomes.

How can a NSW school be 'similar' to schools in W.A., N.T. or Victoria?

If two schools have a similar ICSEA value it means that, **on average**, the students in those schools are experiencing a similar level of educational advantage or disadvantage. This is not the same as saying the school size, the school communities, the student populations or the geographical locations are similar.

Fundamental to the idea of the ICSEA is the notion that, from the point of view of its impact on educational outcomes, the cause of educational advantage or disadvantage is of secondary importance. Whether it stems from levels of parent education, remoteness or unemployment, the impact of educational advantage or disadvantage is the same – variation in academic outcomes.

This of course does not mean that the source of educational disadvantage is of secondary importance when it comes to redressing its impact. Attempts to redress the impact of educational disadvantage must, of course, take into consideration the source of that disadvantage.

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Why is my secondary school compared to primary schools?

In some parts of Australia Year 7 students are still in primary school. ICSEA is constructed to compare schools with Year 7 and/or Year 9 cohorts across the nation. This means that some primary schools appear in the statistically similar school groups for some NSW secondary schools.

Why are selective and comprehensive high schools in the same groups?

Research was undertaken to see the level of impact of selective schools on the overall national trend line comparing ICSEA and performance on NAPLAN. The inclusion or exclusion of selective high schools has minimal impact on overall performance because nationally there are so few of them.

When a comprehensive secondary school is placed in a statistically similar group of schools that includes a selective high school, or a primary school is placed in a group with another school containing an OC class, the inclusion of the schools in the group is not based on comparison of academic performance. It is based on similar levels of community advantage or disadvantage.

Limitations

One drawback of the ICSEA methodology is that it has to assume that census districts are homogeneous when they clearly are not. At this stage this is unavoidable because the ABS data is the only data which is available for all schools nationally. This may change in the future.

Another issue is that the ABS data draw on the 2006 census and it is acknowledged that local profiles may have changed since then, particularly in areas of high mobility. Every school's data, however, is updated with the current census collection district values on an annual basis, using the details of where the currently enrolled students live.

For the next census in 2011 it is expected that the ABS will move to 'Statistical Areas' rather than census collection districts. These will contain far fewer households and will therefore be more representative of the ABS value attached to the area.

There is necessarily a margin of error around the ICSEA values which will be greater for some schools than for others. However, comparison with the statistically similar school group provides a much fairer and informative result than the alternatives - comparison with national averages or comparison with local schools.

For many of our most disadvantaged communities and schools in NSW the comparison with the similar group shows that they are performing at the top of the scale with outstanding results in comparison to schools around Australia with similar levels of disadvantage.

Will ICSEA be reviewed?

ACARA's intention is to revise school ICSEA values annually to take account of changing school enrolments. The process for generating ICSEA values will also be reviewed and refined as considered appropriate.

Contact EMSAD at AnnualSchool.Reports@det.nsw.edu.au
for information and help with ICSEA
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