



Education and Social Cohesion

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Barry McGaw is half-time Professorial Fellow and Director of the Melbourne Education Research Institute at the University of Melbourne and works half-time as a consultant through McGaw Group Pty Ltd. In the latter capacity, he is working with various professional groups, working with Delfin-Lend Lease Limited on the development of the education model that it uses in its community development projects and serving as one of the three Editors-in-Chief of the Third Edition of the *International Encyclopedia of Education* scheduled to be published by Pergamon in 2008.

Professor McGaw returned to Australia at the end of 2005 from Paris where he had been Director for Education at the Organisation for Economic Co-operation and Development (OECD). He had previously been Executive Director of the Australian Council for Educational Research (ACER) from 1985 to 1998 and Professor of Education at Murdoch University in Perth Western Australia from 1976 to 1984.

Professor McGaw is an educational psychologist. He completed a PhD in educational psychology and psychometrics at the University of Illinois and a BSc in chemistry, psychology and statistics and a BEd Hons in educational psychology at the University of Queensland.

He is a Fellow of the Academy of the Social Sciences in Australia, the Australian Psychological Society and the Australian College of Educators. He has been President of the Australian Association for Research in Education, the Australian Psychological Society, the Australian College of Educators and the International Association for Educational Assessment.

Professor McGaw received an Australian Centenary Medal in 2003 and was appointed an Officer in the Order of Australia in 2004. He has been honoured by the University of Illinois with a College of Education Distinguished Alumni Award in 2000 and with the university's Madhuri and Jagdish N. Sheth International Alumni Award for Exceptional Achievement for 2005.

Outline

- Evidence on the quality of Australian education
- Evidence on the equity of Australian education
 - Gap between the best and poorest performers
 - Impact of differences in social background of students
 - Impact of differences in social background of schools
- Potential for schools to build social capital
- Current practices and emerging possibilities in schooling

First, a comment on quality...



Evidence on educational quality:
Performances of 15-year-olds in OECD's Programme for International Student Assessment (PISA).

The evidence on the quality of the outcomes of education systems is drawn from the OECD's Programme for International Student Assessment (PISA) for which details are available on www.pisa.oecd.org. Alternatively, a search using Google with 'pisa' as the search term will yield this website as the first item, ahead of the website for the Leaning Tower of Pisa!

PISA provides direct, internationally comparable evidence of the quality of national education systems with its assessments of the achievements of 15-year-olds. The population assessed is 15-year-olds in schools of any type but it excludes 15-year-olds who are not in school.

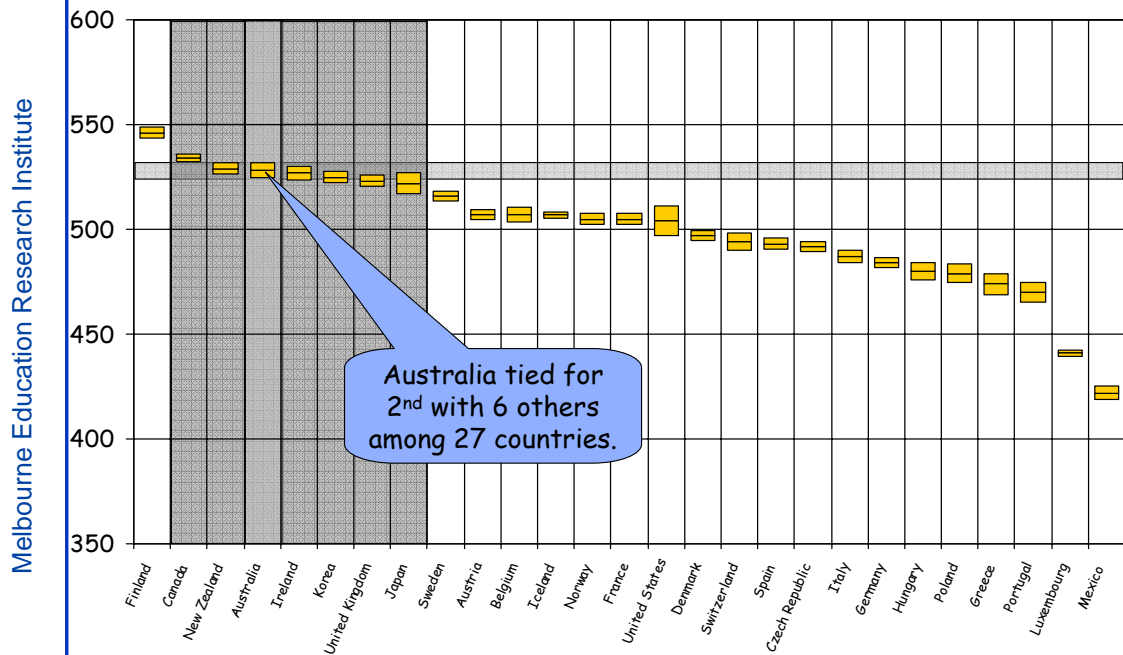
In PISA 2000, students were assessed in reading literacy, mathematics and science, with reading literacy as the main domain and mathematics and science as minor domains. In PISA 2003, mathematics was the main domain and reading and science minor domains together with problem solving which was an additional domain. In PISA 2006, the three original domains are being assessed, with science as the main domain.

PISA does not assess whether students have learned the specific content of their curricula but rather their capacity to use the knowledge and skills they have acquired. Both open-ended and multiple-choice questions are used. In the PISA 2003 mathematics assessments, for example, there were 85 items, 17 of them simple multiple choice, 11 complex multiple choice and 57 items that required students to construct their response. Sample items, illustrating the content and form of assessment, are provided on the PISA website, given above.

All assessment tasks are provided in both English and French and countries using other languages are required to produce two independent translations into their own language(s), one from the English and one from the French, and then to compare them in producing their final draft which is then independently checked by an external translator.

All potential assessment materials are first reviewed in all participating countries for *prima facie* evidence of cultural bias, with doubtful items being removed. All material that survives is then used in an internationally controlled trial in all participating countries a year before the actual PISA assessment. The performances of students on the trial material provide empirical evidence on whether tasks work consistently in all countries. Tasks that do not are removed from the pool of tasks from which those to be used in the final tests are selected.

Mean reading literacy results (PISA 2000)



OECD (2004), *Learning for tomorrow's world: First results from PISA 2003*, Table 2.5a, p.354.

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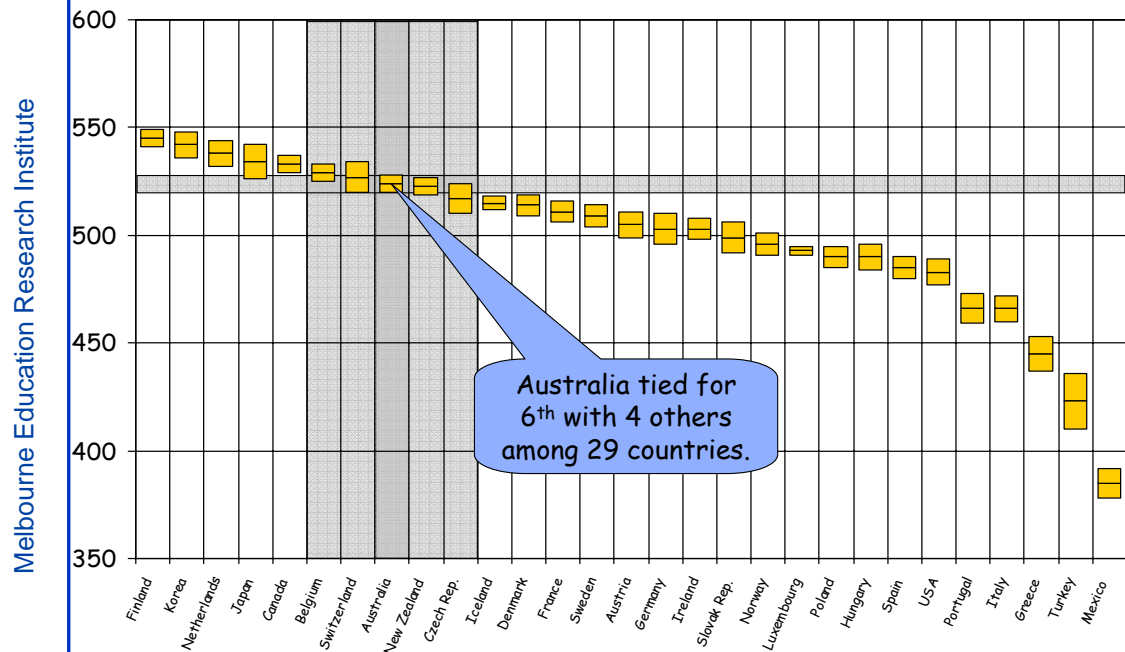
The figure above shows the mean performances of OECD countries in reading literacy in PISA 2000. Reading literacy assessed in PISA is the capacity to use, interpret and reflect on written material.

The line in the middle of the box for each country gives the mean performance of 15-year-olds in the country. The results reveal marked variations in performance levels among the 27 OECD countries – ranging from Finland, significantly better than all others at the top, to Mexico, significantly worse than all others at the bottom.

The size of a box reflects the precision with which a country's mean is estimated, the least precise in PISA 2000 being that for the United States. Where the boxes overlap on the vertical dimension, there is no significant difference between the means for the countries. (Further details are given in the PISA report, as indicated in the source information at the foot of the figure.)

Australia ranked in 4th place but its mean is not significantly different from those of Canada and New Zealand ranking above it or Ireland, Korea, the United Kingdom and Japan ranking below it. It is, therefore, appropriate to say that Australia ranked between 2nd and 8th or that Australia tied in 2nd place with six other countries.

Mean mathematics results (PISA 2003)



OECD (2004), *Learning for tomorrow's world: First results from PISA 2003*, Table 2.5a, p.354.

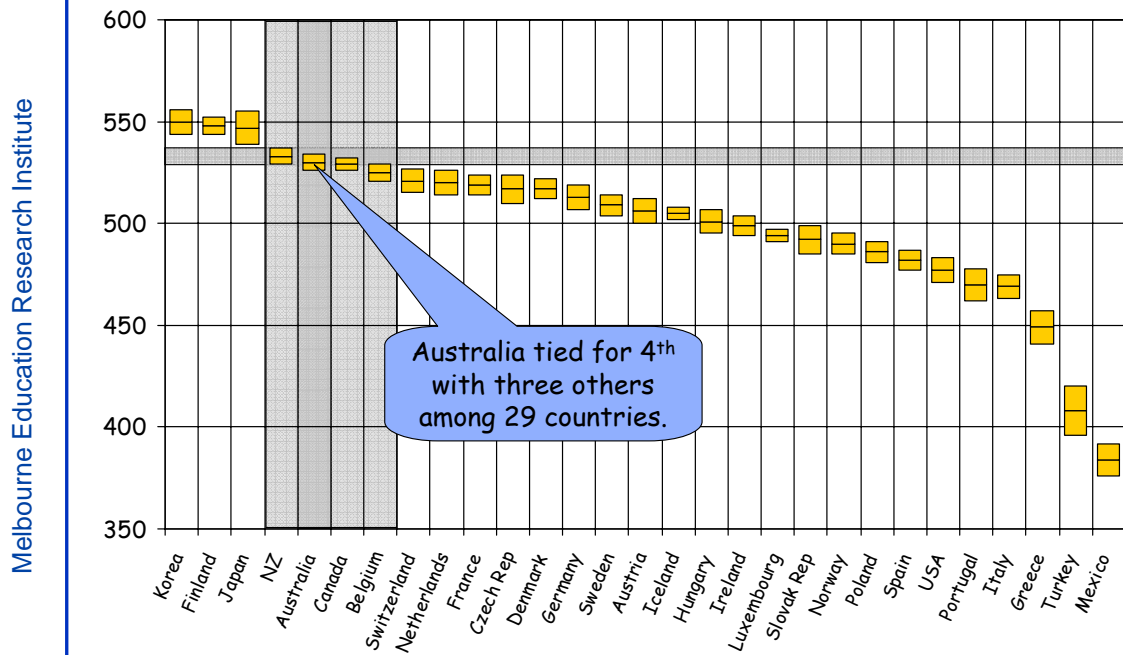
The figure above shows the mean performances of OECD countries in mathematics in PISA 2003, in which mathematics was the main domain assessed. Mathematical performance assessed in PISA is the capacity to use mathematics to solve real-life problems – knowing when it is relevant to use mathematics, how to represent a problem mathematically and how to solve it.

There were marked differences in country performances in mathematics in PISA 2003, even more marked than those in reading in PISA 2000. Finland again ranked 1st but this time was not significantly better than Korea, the Netherlands and Japan.

Australia ranked 8th but, taking account of the imprecision in the estimates of the means, Australia can be said to have ranked between 6th and 10th or to have tied in 6th place with four others.

It should be noted that Australia is not significantly worse than Japan, which ranked 4th on the basis of its mean but for which the estimate of the mean was somewhat imprecise.

Mean problem solving scores (PISA 2003)



Source: OECD (2001) *Knowledge and skills for life: First results from PISA 2000*, Fig. 2.4, p.53

The figure above shows the mean performances of OECD countries in problem solving, tested for the first time in PISA 2003. Problem solving was assessed in PISA in three types of situation: making decisions under constraints; evaluating and designing systems for a particular situation; and trouble-shooting a malfunctioning device or system based on a set of symptoms.

There were marked differences in performance among the countries in the problem solving abilities of their 15-year-olds. Korea, Finland and Japan ranked at the top with no significant differences among them.

Australia ranked 5th but, taking account of the imprecision in the estimates of the means, Australia can be said to have ranked between 4th and 7th or to have tied in 4th place with three others.

Second, several comments on equity...

Average performances give only a partial picture of the quality of education systems. They do not give any indication of the equity with which education systems produce their student performances. PISA data speak to the question of equity as well as the question of quality.

Evidence on educational equity:

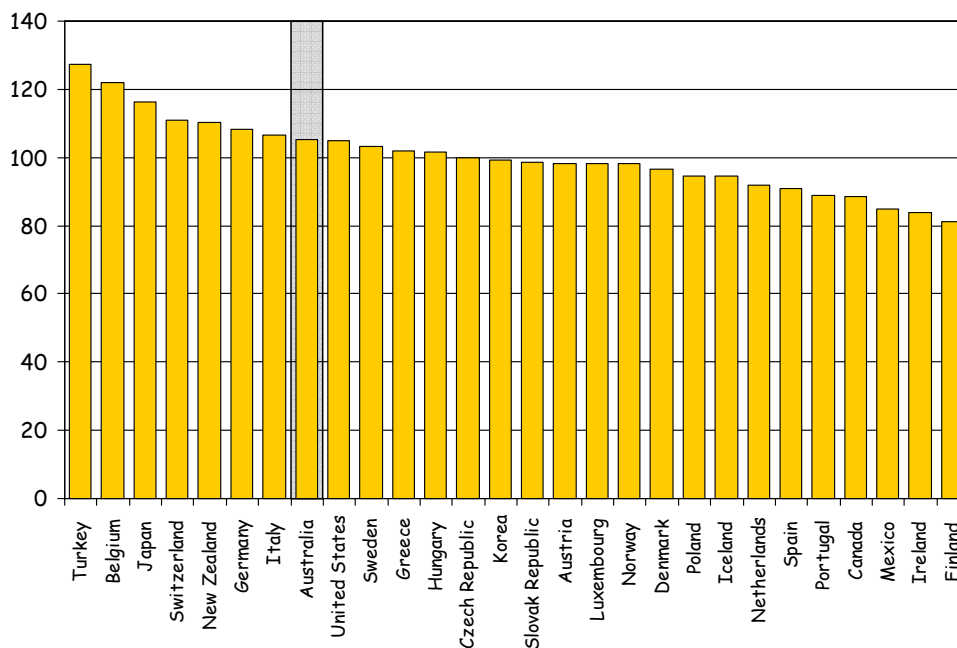
Extent of variation among students and schools in performances of 15-year-olds in OECD's PISA.

The issue of equity can be addressed in a number of ways. The simplest is to examine the extent of the spread of results within a country. There will always be individual differences in performance creating a gap between the best and the poorest performers. If the gap is small, it is most likely to be because potentially better performers are being held back.

The *No Child Left Behind Act* in the United States does direct attention to the plight of poor performers who are left behind and presses for higher expectations to be set for them and achieved. The *Act* specifically requires schools and school districts to set and achieve improvement targets for subpopulations, and not just for the overall student cohort. This is particularly the case for Black and Spanish-Americans who are typically over-represented among low performers and under-represented among high performers.

Without expecting, or wanting, the differences among students within a country to be small, it is still worthwhile to examine whether poorer performers are being left further behind better performers in some countries than others.

Variation in mathematics performance (PISA 2003)



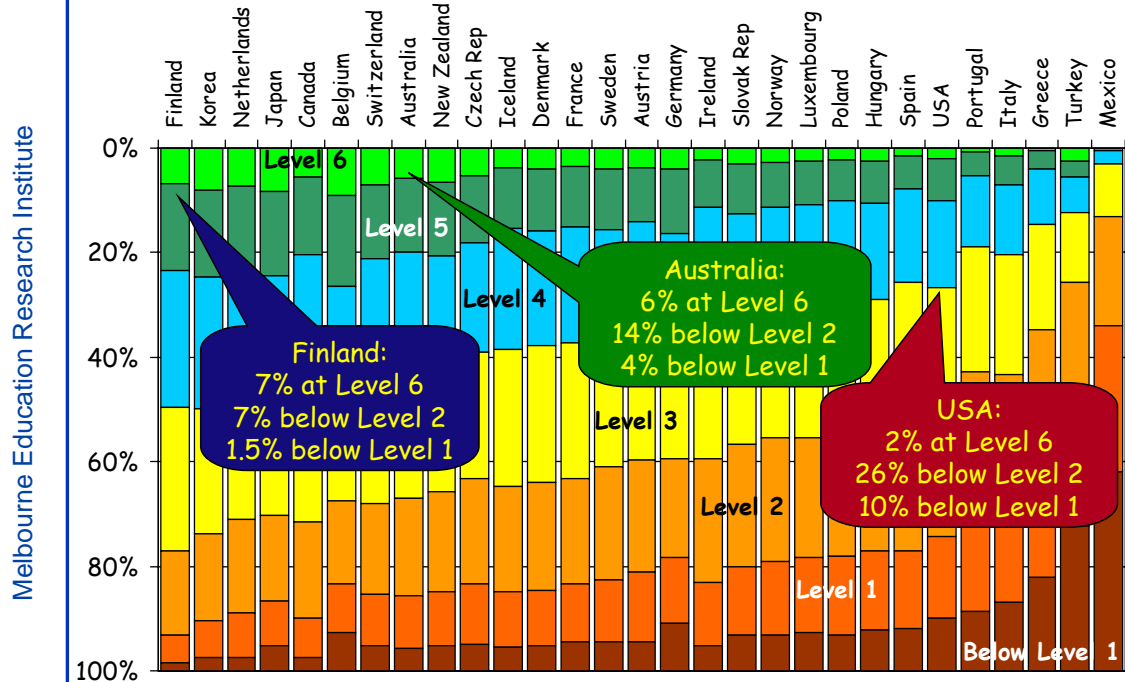
OECD (2004), *Learning for tomorrow's world*, Table 4.1a, p.383.

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The variation in results in mathematics in PISA 2003 within countries is shown in the figure above. The statistical variance for each country is expressed as a percentage of the average variance in student performances across OECD countries.

The variation of performances in Australia, at 105, is 5 per cent greater than the OECD average. It is considerably smaller than in Turkey, Belgium and Japan but considerably larger than in Finland, Ireland, Mexico, Canada and Portugal.

% at mathematics proficiency levels (PISA 2003)



On each of the PISA scales, well-defined proficiency levels are established to provide a way of describing the differences in performance of 15-year-olds located at different points on the scale. On the PISA 2003 mathematics scale, for example, those at the highest level, Level 6, are able to conceptualise, generalise and use information based on investigations and modelling of complex problems, and to link and move between different information sources and representations. Those at Level 2 can extract and use relevant information from single source and employ basic algorithms, formulae, procedures. Those at Level 1 can answer only questions in familiar contexts where all relevant information is present and where only the use of routine procedures is required.

The figure above shows the percentage of 15-year-olds in each country at each of the six levels defined as well as those in an undefined region on the scale described as 'below Level 1'. The countries are arranged in order of their mean performances as in the figure on slide 6.

There are several countries with a greater percentage of students at Level 6 than Finland, the country with the highest mean performance. The reason that Finland has the highest mean is that it has so few students at Level 1 and, particularly, below Level 1. Canada is similar to Finland in this respect. Belgium provides an interesting contrast, with higher percentages than Finland at both the highest and lowest levels. In Belgium, there are more poor performers being left behind than in Finland or Canada. A similar observation could be made about Germany in comparison with countries ranked near it on the basis of mean performance.

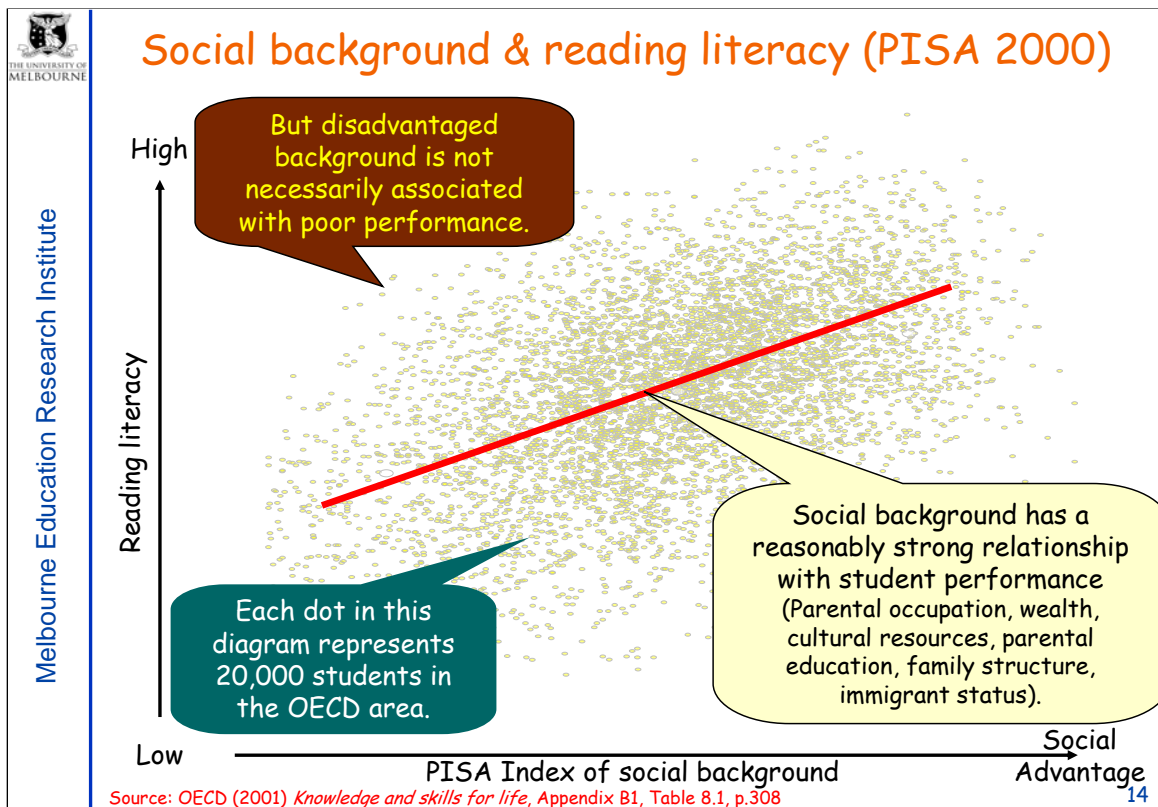
The distribution of the performances of Australia's students over the levels is essentially in line with its overall mean performance. It generally has more students at higher levels and fewer at lower levels than countries ranked below it on mean performance and fewer and higher levels and more at lower levels than countries ranked above it on mean performance.

Storyline so far...

There are marked performance differences among countries. Australian 15-year-olds perform relatively well but poorer performers are left further behind than in some countries.

Evidence on educational equity:
**Relationships between the achievements and social
backgrounds of 15-year-olds in OECD's PISA.**

Variation in student performances within countries provides only a limited perspective on issues of equity. A more powerful and important picture is provided by the relationship between students' achievements and their social background.



The 15-year-olds involved in PISA complete a questionnaire that collects information important for the interpretation and analysis of the results. Students are asked about characteristics, such as gender, economic and social background, and activities at home and school.

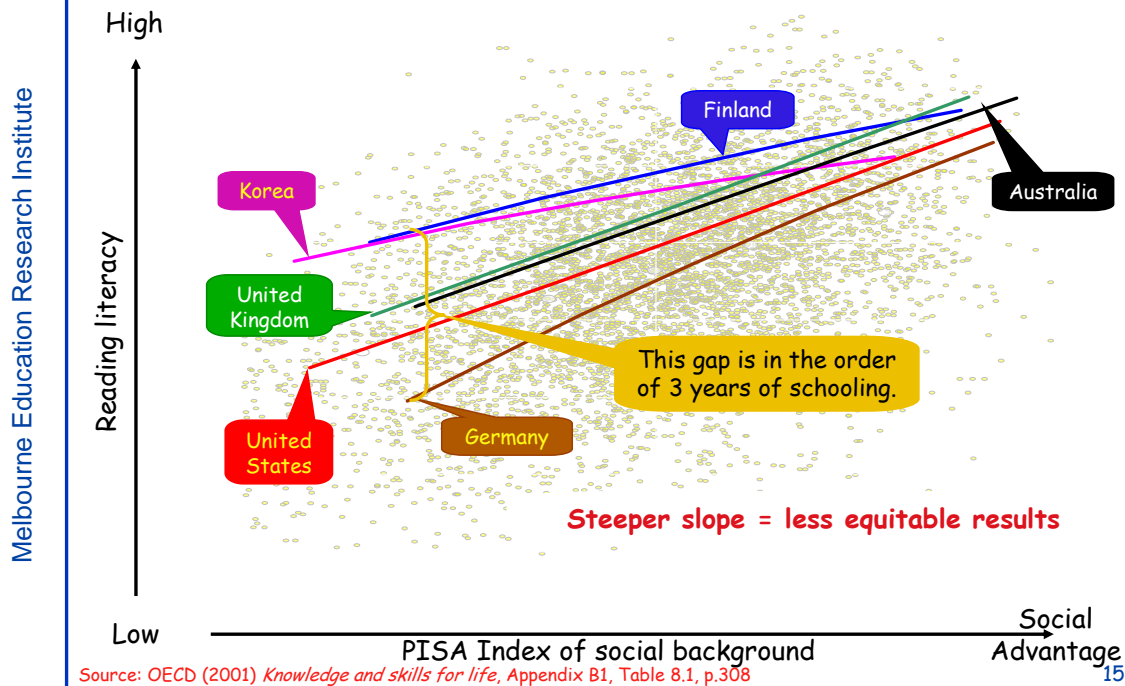
The information on economic and social background – parents' education and occupation, cultural artefacts in the home – permit the construction of an index of social background that ranges from socially disadvantaged to socially advantaged. This scale is comparable across countries.

The relationship between social background and reading literacy in PISA 2000 is shown in the figure above in which the results of the 265,000 15-year-olds in the sample on both variables are plotted. The correlation is relatively high (around 0.45) indicating quite a strong relationship between the two variables. The slope of the regression line that summarises the relationship is quite steep, indicating that increased social advantage, in general, pays off with considerable increase in educational performance.

It can, nevertheless, be seen that there are many exceptions – socially advantaged individuals who do not perform well (towards the bottom-right of the graph) and students from disadvantaged backgrounds who perform well (towards the top-left of the graph).

This result has been long established in research in many individual countries and it can lead to a counsel of despair. If the relationship between social background and educational achievement is so strong, education can seem to be impotent, unable to make a difference. There is other research evidence that provides assurance that schools can make a difference to the life chances of their students but the PISA also provide additional insights because it is possible to compare regressions lines of the type above for individual countries.

Social background & reading literacy (PISA 2000)



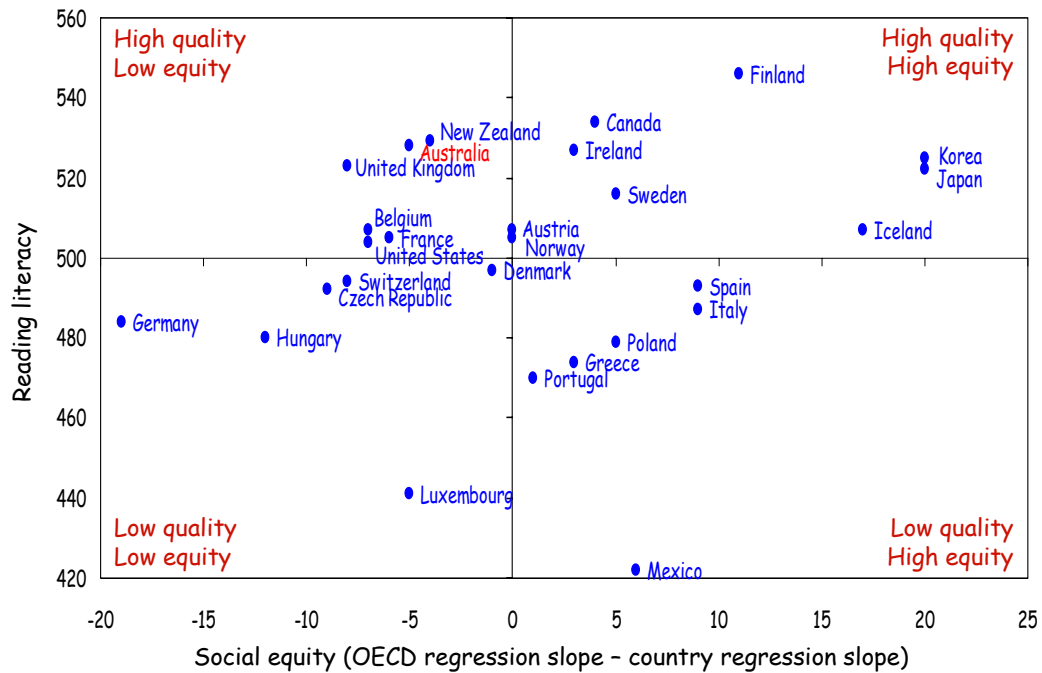
An examination of the relationship between social background and educational achievement country-by-country reveals marked differences among countries. The figure above shows the results for six countries. The lines for Finland and Korea are significantly less steep than the one for the OECD as a whole which was shown in the previous slide. Increased social advantage in these countries is associated with less increase in educational achievement than in the OECD as a whole. The results in these countries are more equitable than those of the OECD overall. Students differ in achievement but not in a way that is so substantially related to their social background.

The lines for the United Kingdom, Australia, the United States and Germany are all significantly steeper than the one for the OECD as a whole. In all of these countries, social background is more substantially related to educational achievement than in the OECD as a whole. Their results are inequitable in the sense that differences among students in their literacy levels reflect to a marked extent differences in their social background.

The differences between these five lines at the left-hand end are substantial. Socially disadvantaged students do very much worse in some of these countries (most notably Germany but also the US and the UK) than in the other two. The gap in educational achievement between socially disadvantaged students in Germany and similarly socially disadvantaged students in Finland and Korea represents around three years of schooling.

More detailed analysis of the German data shows the pattern to be strongly related to the organisation of schooling. From age 11, students are separated into vocational and academic schools of various types on the basis of the educational future judged to be most appropriate for them. Students from socially disadvantaged backgrounds generally end up in low-status vocational school and achieve poor educational results. Students from socially advantaged backgrounds are directed to high-status academic schools where they achieve high-quality results. The schooling system largely reproduces the existing social arrangements, conferring privilege where it already exists and denying it where it does not.

Social equity & reading literacy (PISA 2000)



Source: OECD (2001) *Knowledge and skills for life*, Table 2.3a, p.253.

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If lines for more countries were to be added to the figure on the previous slide, the pattern would become difficult to discern. The figure above provides a clearer picture in which the locations and slopes of the lines for all OECD countries are represented.

Mean performances of countries in reading literacy are represented on the vertical axis. The slope of the regression line for social equity on reading literacy is represented on the horizontal axis as the difference between the slope for the OECD as a whole and a country's own slope. This places to the left countries where the slope is steeper than in the OECD as a whole (that is, countries in which social background is most substantially related to educational achievement) and to the right countries where the slope is less steep than that for the OECD as a whole (that is, countries in which social background is least related to educational achievement).

Countries high on the page are high-quality and those to the far right are high-equity. The graph is divided into four quadrants on the basis of the OECD average on the two measures.

The presence of countries in the 'high-quality, high-equity' quadrant (top right) demonstrates that there is no necessary trade off between quality and equity. They show that it is possible to achieve both together. Korea, Japan, Finland and Canada are among them.

As already indicated in the previous slide, Australia is a 'high-quality, low-equity' country, with a high average performance but a relatively steep regression line. It is in the top-left quadrant along with the United Kingdom and New Zealand.

The United States is only average quality but it is low-equity. Germany, as a low-quality, low-equity country, is in the bottom-left quadrant along with a number of other countries that also begin to separate students into schools of different types as early as age 11-12.

Storyline so far...

There are marked performance differences among countries. Australian 15-year-olds perform relatively well but poorer performers are left further behind than in some countries.

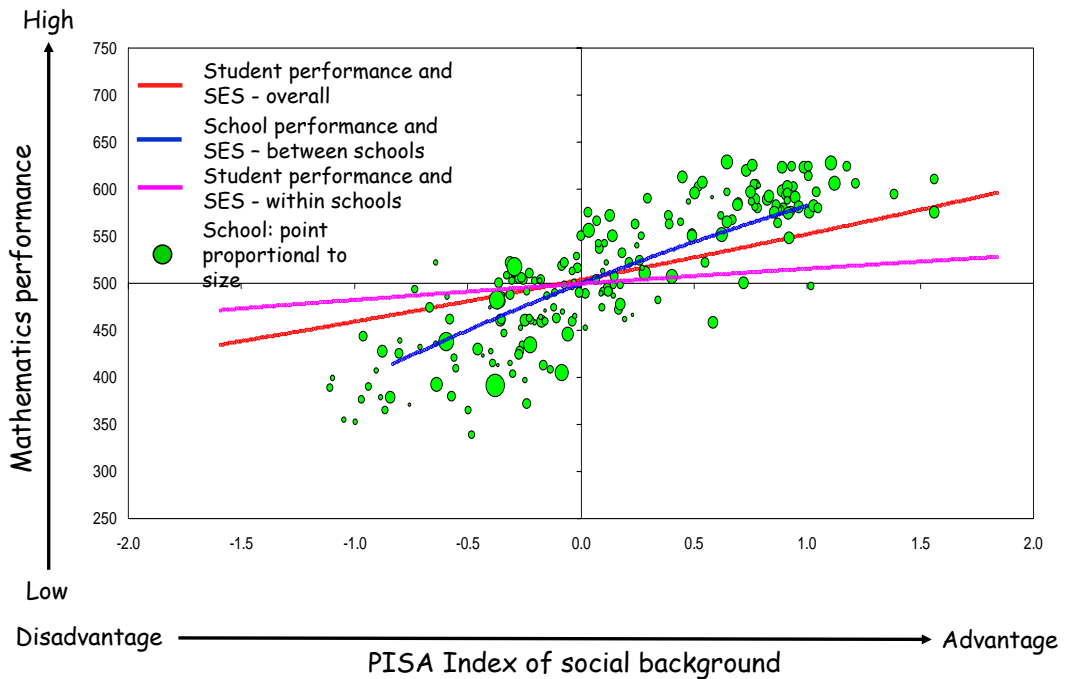
Students' social backgrounds are more strongly related to achievement in Australia than in countries such as Canada, Finland and Korea.

Evidence on educational equity:

Relationships between the achievements and social backgrounds of 15-year-olds in OECD's PISA between schools and within schools.

In addition to the overall relationship between social background and educational achievement, it is helpful in thinking about equity in education to examine also the relationship between these two variables between schools and within schools.

Mathematics vs social background - Germany



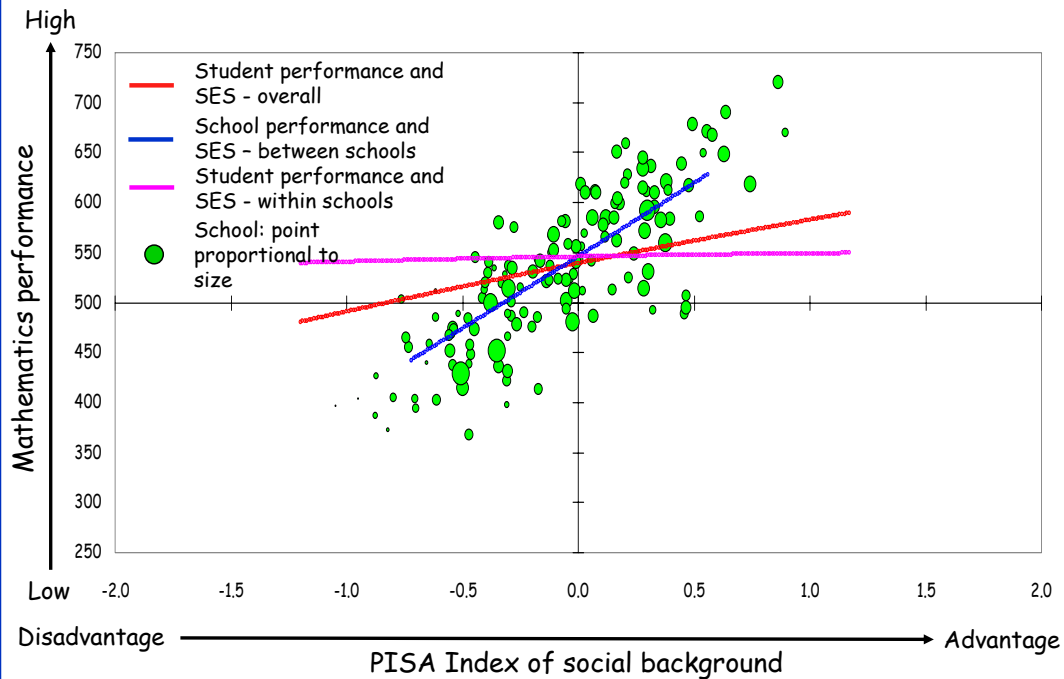
OECD (2004), *Learning for tomorrow's world*, Figure 4.13, pp.199-203.

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The figure above shows the relationships between social background and achievement in PISA 2003 mathematics for Germany, overall, between schools and within schools. The overall relationship is similar to the one shown in previous slides between social background and PISA 2000 reading literacy results, though higher up the graph since Germany's mean performance in PISA 2003 mathematics was essentially at the OECD mean whereas its PISA 2000 result in reading literacy was considerably below the OECD average.

Much steeper is the between-schools regression line which emphasises that, in Germany, students are grouped in schools in a way that differentiates them by both social background and achievement. Schools that have high-performing students tend to have socially advantaged students and vice versa. The within-schools regression line is more nearly horizontal indicating that there is very little relationship between achievement and social background within schools. The reason is that there is little variation on these two dimensions within schools; virtually all the variation is between schools.

Mathematics vs social background - Japan



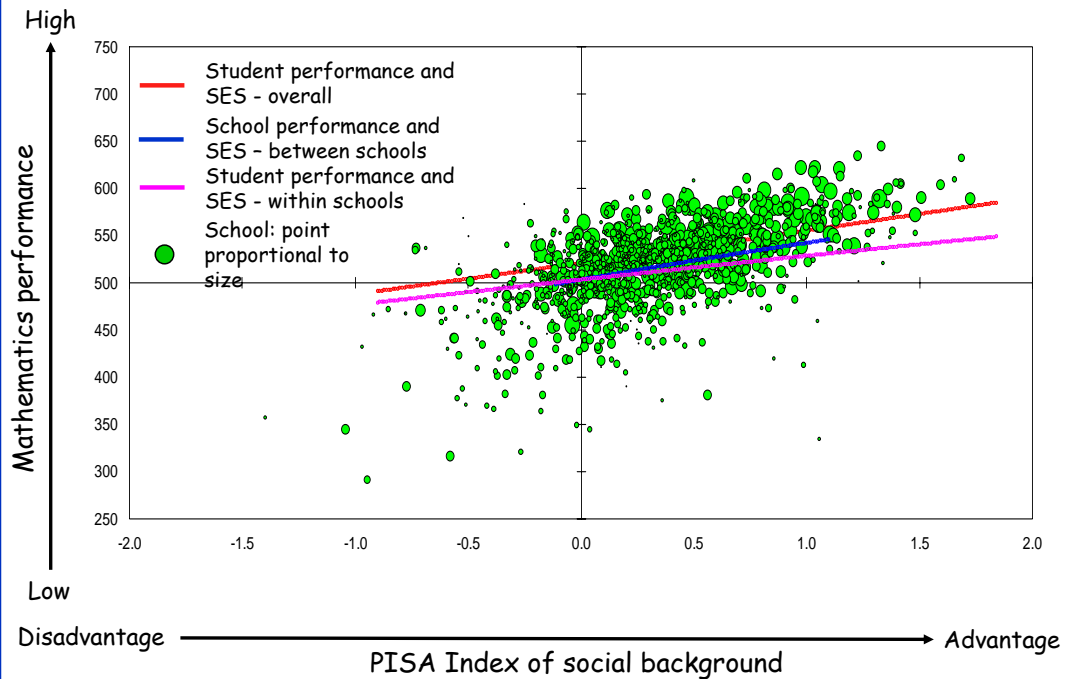
OECD (2004), *Learning for tomorrow's world*, Figure 4.13, pp.199-203.

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The differences in the three relationships between social background and achievement in mathematics are even more marked in Japan than in Germany. In Japan, the between-schools regression line is much steeper than the overall regression line, emphasising the extent to which students are grouped in schools on the basis of both achievement and social background.

In this case, the within-schools regression line is actually horizontal indicating that there is no relationship between achievement and social background within schools. The reason is that there is little variation on these two dimensions within schools; essentially all the variation is between schools.

Mathematics vs social background - Canada

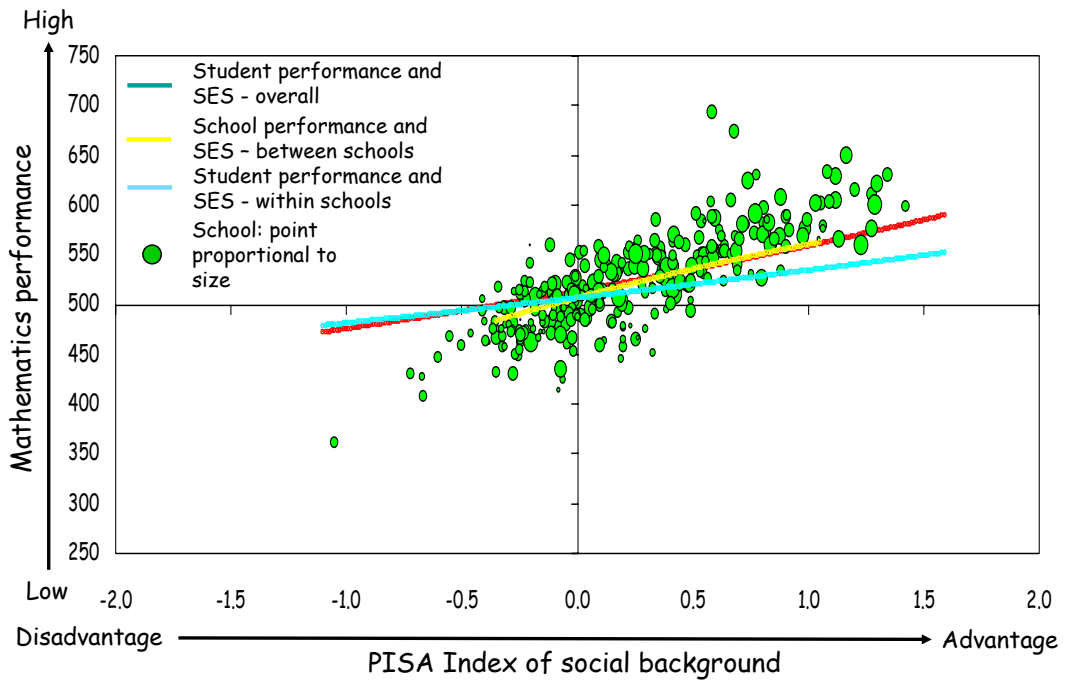


OECD (2004), *Learning for tomorrow's world*, Figure 4.13, pp.199-203.

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The pattern for Canada is markedly different from those for Germany and Japan, as shown in the figure above. In this case, the three regression lines are not markedly different in slope. Students are generally not strongly grouped into schools on the basis of social background so the between-schools regression line has nothing like the steepness of the corresponding lines for Germany and Japan. The Canadian education is more equitable by this measure than those of Germany and Japan.

Mathematics vs social background - Australia

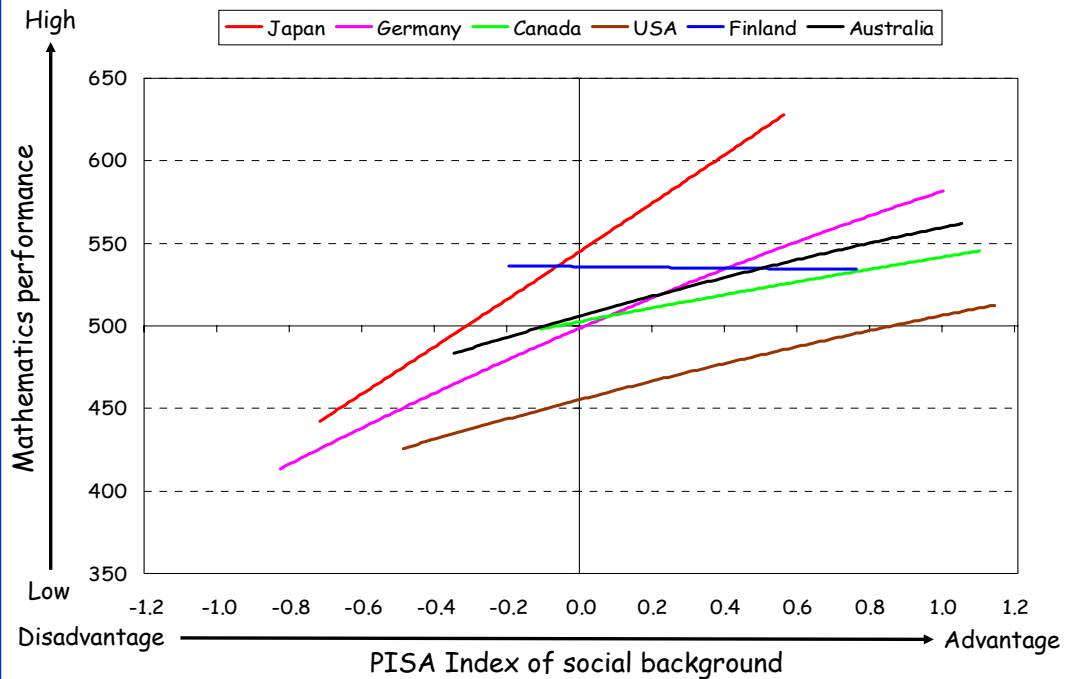


OECD (2004), *Learning for tomorrow's world*, Figure 4.13, pp.199-203.

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The pattern for Australia, as shown in the figure above, is between those of Canada, which is more equitable, and those of Japan and Germany, which are less equitable.

Between-school regression slopes



OECD (2004), *Learning for tomorrow's world*, Figure 4.13, pp.199-203.

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The figure above compares the between-schools regression lines for Japan, Germany, Canada and Australia, which have already been shown, and those for the United States and Finland.

The lines appear steeper here than the corresponding ones in the previous figures because a reduced range has been used on the vertical scale for mathematics performance. The important point to be noted in this figure is the differences among the slopes.

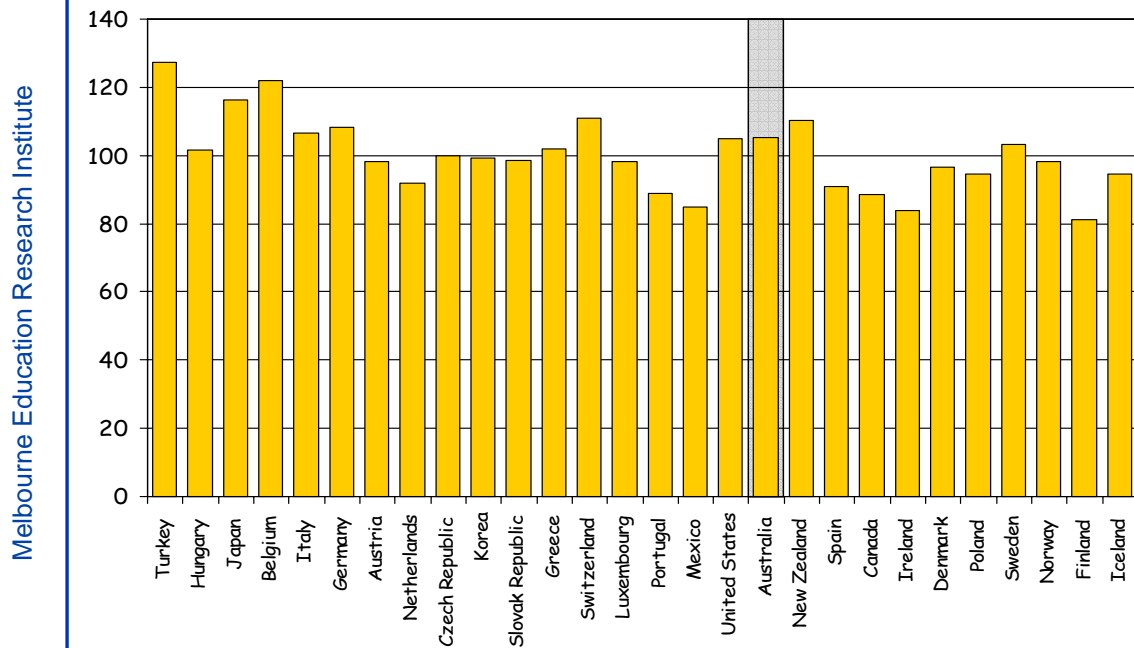
The between-school slopes for Japan and Germany are the steepest, as already noted. The steepness of the slope for Australia is between those for Japan and Germany and that for Canada. The slope for the United States is similar to that for Australia.

The between-schools regression line for Finland is remarkable in being horizontal. That shows that there is no relationship between the average student achievement and the average student social backgrounds in schools. In Finland, the differences lie within schools and not between them.

Evidence on educational equity:
Sources of variation among students and schools in performances of 15-year-olds in OECD's PISA.

A further way in which to examine the equity of educational outcomes is to investigate the sources of variation in student performances.

Variation in mathematics performance (2003)

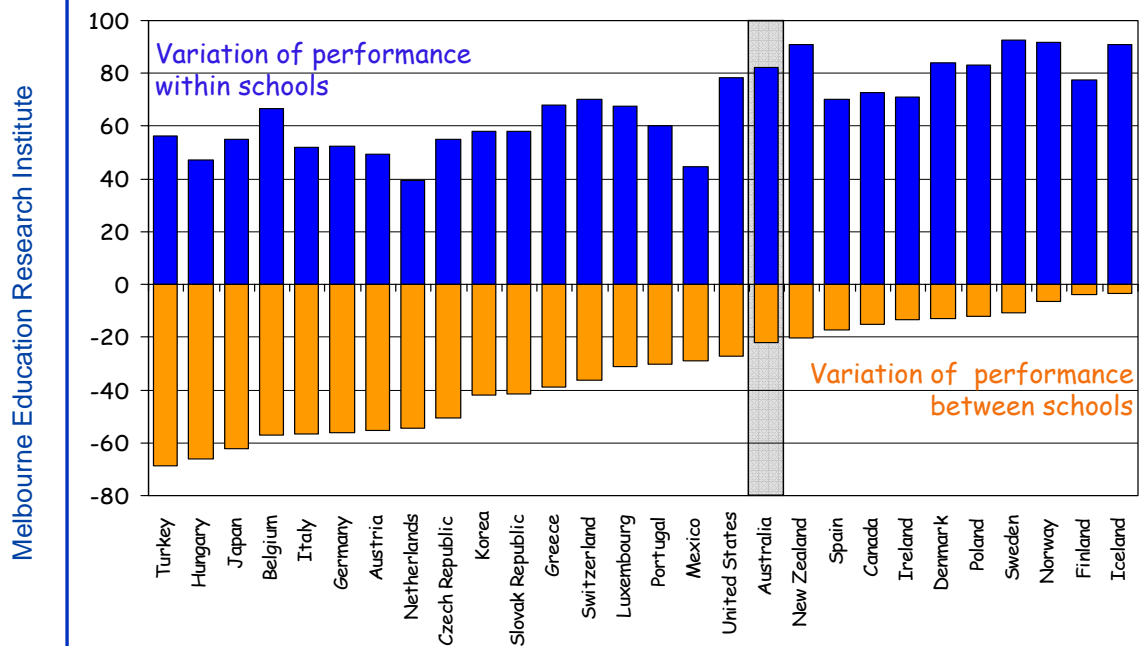


OECD (2004), *Learning for tomorrow's world*, Table 4.1a, p.383.

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The figure above gives again the overall variation in performances among students in each of the OECD countries. This time the countries are arranged in a different order to facilitate the comparisons to follow.

Variation in mathematics performance



OECD (2004), *Learning for tomorrow's world*, Table 4.1a, p.383.

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The figure above divides the variation for each country into a component due to differences among students within schools, shown above the zero line, and a component due to differences between schools shown below that line.

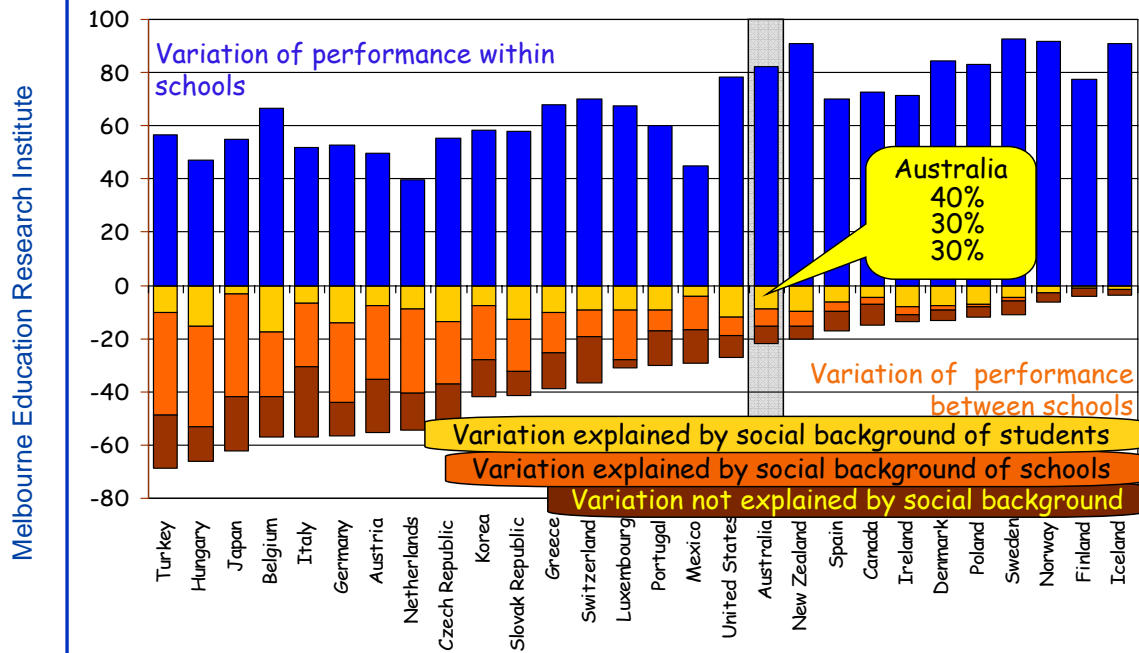
In Iceland, Finland and Norway there is very little variation in scores between schools. For parents in these countries, choice of school is not very important because there is so little difference among schools.

Among the countries in which there is a large component of variation between schools, there are some in which this occurs by design. In Hungary, Belgium and Germany, for example, students are sorted into schools of different types according to their school performance as early as age 12. The intention is to group similar students within schools differentiated by the extent of academic or vocational emphasis in their curriculum. This is intended to minimise variation within schools in order then to provide the curricula considered most appropriate for the differentiated student groups. It has the consequence of maximising the variation between schools.

In some other countries, the grouping of students is less deliberate but, nevertheless, results in substantial between-school variation. In Japan, for example, 53 per cent of the overall variation is between-schools. In Korea, 42 per cent is between schools. In Australia, 20 per cent is between schools.

For Poland, in PISA 2000, 63 per cent of the variation in reading was between-schools whereas in PISA 2003 in mathematics only 13 per cent was between schools. This remarkable difference was due to a reform in which early streaming of students into schools of different types was abandoned in favour of comprehensive schools for students up to the age at which PISA measures their performance. (Not only was the between-school variation reduced. Poland was the only country to improve its average performance significantly on all measures used in both PISA 2000 and PISA 2003. It did so largely by raising the achievement levels of its poorer performing students.)

Variation in mathematics performance



A further way in which to examine equity is to determine the extent to which the variation between schools can be explained in terms of differences in the social backgrounds of the students. This is done in the figure above, with the between-school variation subdivided into three components: (a) variation that can be accounted for in terms of the social backgrounds of the individual students in the schools; (b) variation that can be accounted for in terms of the average social background of the students in the schools; and (c) variation that cannot be accounted for in terms of the social backgrounds of the students.

The first indicates the impact of students' own social backgrounds on their educational outcomes, the second the impact of the company they keep in school. In Australia, 70 per cent of the variation between-schools can be accounted for in terms of differences between schools in the social background of their students – 40 per cent individual social background and 30 per cent the average social background of students in the schools.

Where differences in social background account for a large percentage of the between-school variation, this suggests that the educational arrangements in the country are inequitable. Where much of the account derives from the social background of other students in the school, it suggests that there is a benefit for advantaged students in keeping company with similarly advantaged students but a compounded disadvantage for disadvantaged students keeping company with others like themselves. That suggests an impossible policy conundrum for those who might want different groupings to ameliorate the influence of social background on disadvantaged students because it implies that reduction in disadvantage for them could only be won by a reduction in advantage for the advantaged. Additional analyses of the PISA 2000 data for Austria, however, offer a more encouraging conclusion. These analyses suggest that "that students with lower skills benefit more from being exposed to clever peers, whereas those with higher skills do not seem to be affected much. Social heterogeneity, moreover, has no big adverse effect on academic outcomes. These results imply considerable social gains of reducing stratification in educational settings" (Schneeweis & Winter-Ebmer, *Peer effects in Austrian schools*. Working Paper No. 0502, Department of Economics, Johannes Kepler University of Linz, Austria 2005, p.2).

Storyline so far...

There are marked performance differences among countries. Australian 15-year-olds perform relatively well but poorer performers are left further behind than in some countries.

Students' social backgrounds are more strongly related to achievement in Australia than in countries such as Canada, Finland and Korea.

Schools differ little in some countries; where they do, much of difference can be explained by the social backgrounds of individual students and those whose company they keep. The negative effects of poor company may be much greater than any positive effect of good company.

Could social cohesion be threatened by a system that tends to confer privilege where it exists and so actively reproduces the status quo?

Third, some comments on the potential for education to build social capital.



The story so far has paid considerable attention to equity in educational outcomes on the grounds that it can contribute substantially to social cohesion. Educational inequity in the sense considered here involves a relatively strong relationship between educational outcomes and social background, with the implication that the education system is consistently conferring privilege on those who already have it and denying it to those who do not.

In all countries, the socially privileged do have an advantage educationally. The reasons, no doubt, lie in a complex mix of genetic and environmental factors. If it were the same in all countries, we might conclude that there is an inevitability about this that no education system might challenge. It is, however, not the same in all countries as the analyses have shown. Some countries do effectively ameliorate the impact of social background to a greater extent than others. They include countries that might be thought to be relatively homogeneous but also Canada, which is rather like Australia in its social mix.

We turn now to consideration of more direct ways in which education systems might contribute to the development of social cohesion.

Notion of social capital

- Physical capital
 - physical tools that enhance productivity
 - from a screwdriver to a factory
- Human capital
 - human capacities that enhance productivity
 - 'number of years of education' is the standard indicator
 - direct measures of knowledge and skills are better
- Social capital
 - social networks (and norms of reciprocity and trust) that enhance productivity
 - can enhance the development of human capital

When the OECD convened the chief executives of the national education ministries for the first time in February 2003, they were invited first to nominate the major policy issues with which they expected to deal over the following 3-5 years. They identified continuing work on issues of quality and efficiency which had already been elevated in OECD's work program on education with the implementation of PISA. They added, however, work on the contribution that education might make to the development of social cohesion.

In many OECD countries, the education systems had long been engaged in dealing with increasingly diverse student cohorts as a consequence of demographic changes produced by immigration but that was more reactive than the position that the chief executives had in mind.

The OECD Directorate for Education, through its Centre for Educational Research and Innovation, had already undertaken work on social capital in which it had reviewed evidence on the impact of social capital on human well-being, in health and education as well as on economic development (*The Well-being of Nations*, Paris: OECD, 2001). One of the consultants for this work was Robert Putnam whose work on social capital had become well-known and influential following the publication of his book *Bowling Alone: The Collapse and Revival of American Community*, New York: Simon & Schuster, 2000.

Social capital is defined as "networks and norms of reciprocity and trust". It is important to the effective functioning of societies and the well-being of individuals. Just as physical capital and human capital can enhance productivity, so can social capital.

The typical measure of human capital is only a rough proxy. It is 'number of years of education' but one thing the PISA results show is that the same number of years of education does not produce, on average, the same level of knowledge and skills in all countries. While direct measures of knowledge and skills would be better indicators of human capital than years of education, it is important to note that even the rough proxy has been robust enough to establish the importance of human capital to a range of economic and other outcomes.

In the case of social capital, only rough proxies have so far been used yet they too have been sufficiently robust to establish important relationships with economic and other social outcomes of the type summarised in *The Well-being of Nations*.

Benefits of social capital

- Social networks have value
 - Networks have direct value to network members
 - Networks have 'externalities'
 - e.g. strong neighbourhood network can deter crime for all
- Empirical evidence of impact of social capital
 - Positive
 - lower crime rates, better public health & administration...
 - more efficient capital and labour markets
 - better educational performance
 - Negative
 - but that is possible as for all forms of capital
- Forms of social capital
 - Bonding: links between people similar in class, ethnicity...
 - Bridging: links that cut across social groups

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The social networks that underpin social capital have direct value to network members but can also confer benefits on others who are not members. In that sense, they have 'externalities'. As a simple example, strong neighbourhood networks that deter crime benefit all who live in the neighbourhood, whether or not they are members of the networks.

There is now good empirical evidence on the positive impact that social capital can have. High levels of social capital can lead to lower crime rates, improved child welfare, better public health, better public administration, reduced political corruption, more efficient capital and labour markets and better educational performance. There can be negative effects also when networks provide benefits for members at the cost of those not in the networks. One could point to the Mafia as a group with high social capital that has such a negative effect on others. But physical capital (e.g. guns, communication networks) and human capital (e.g. clever lawyers and financial advisers) can also have negative impact in the hand of a group such as the Mafia.

At least two forms of social capital can be usefully distinguished:

- bonding social capital: ties with a given social or ethnic group
- bridging social capital: ties between groups.

These two forms of social capital are not independent or in opposition. "Dutch researchers, for example, have found that the Turkish immigrants who are most actively involved in broader Dutch society are precisely those who are also most actively involved in the life of the Turkish community itself. Bonding, in short, can be a prelude to bridging, rather than precluding bridging" (Putnam, R. (2004) *Education, diversity, social cohesion and "social capital"*, Paper presented to an OECD Education Ministers Forum on Education and Social Cohesion and available among the documents from that meeting, accessible via the link to background documents on the website: www.oecd.org/edumin2004.)

Social capital and education

- Few common experiences remain in modern societies
 - Clubs and other community and social organisations have declined in scope and influence
 - School is said to remain the one common experience
- It is schooling, not school, that is common
 - Schools typically divide - by gender, faith, social background, wealth, geography
 - Schools can readily build bonding social capital
 - Can schools build bridging social capital?
- What might we expect of Australian schools?
 - They clearly divide, and do so increasingly.
 - Do they reinforce divisions?
 - What is the impact of the govt/non-govt division?

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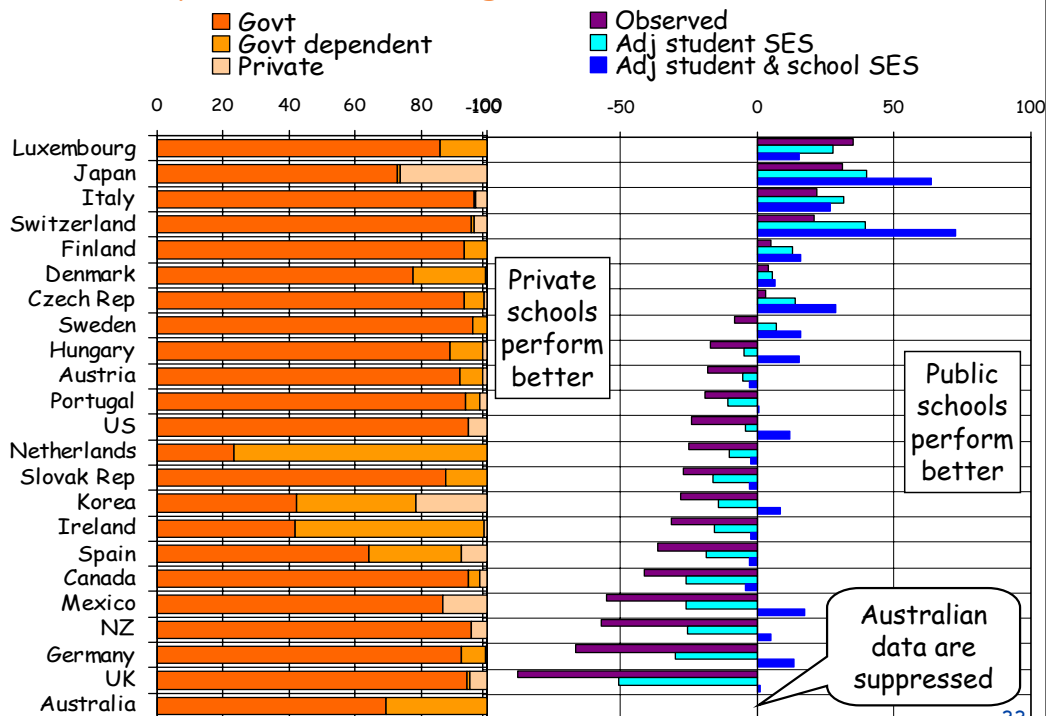
It is often claimed that many of the experiences that used to be shared by young people growing up are no longer available. Various clubs and other social organisations of which young people, and sometimes their families, were members have either substantially declined or disappeared altogether

In this context, it is then often said that school is the one common experience building shared understandings. In fact, it is schooling, not school, that is the common experience. Schools frequently divide on the basis of gender, faith, social background, wealth, geography and so on. Schools are, therefore, well placed to build bonding social capital within their constituencies but the important question is whether they can build bridging social capital.

From an Australian perspective, we can note that our schools clearly divide each cohort of students on all of the dimensions just mentioned. We need to ask whether their practices reinforce the divisions or whether they work in any way effectively to bridge them.

Given the growth of the non-government sector, we need specifically to consider whether that development, in the name of choice and, with government funding, in the name of fiscal fairness, has positive or negative effects on education outcomes and on bridging social capital and, ultimately, social cohesion.

Public & private schooling in the OECD (PISA 2003)



Enrolment data for public and private schooling in OECD countries are provided in OECD's annual publication, *Education at a Glance*. In these data, as shown in the left-hand panel in the figure above, three categories of schools are distinguished:

- Government schools (funded and managed by government agencies)
- Government dependent schools (private managed but with some government finances)
- Private (privately managed and fully privately funded).

In the Netherlands, there are no private schools but almost 80 per cent of students attend government-dependent private schools. These schools receive full public funding on the same basis as government schools and do not charge fees in addition. They thus differentiate themselves from the public sector and from each other on the basis of values, faith-commitment, or pedagogy but not resources. In the United States, there are no government-dependent schools (except for a few private schools accepting students with public vouchers). Schools are either publicly funded and run or privately funded and run. In Australia, there are only a small number of private schools. Virtually all schools are either government or government-dependent.

The right-hand panel above shows the difference between PISA 2003 mathematics means scores for government and other schools. When the difference is positive, government schools have a higher mean, as in Luxembourg, Japan, Italy, Switzerland, Finland, Denmark and the Czech Republic (the dark purple bars). Once differences between the school systems in the social backgrounds of their students and the schools have been taken into account, there is no remaining significant overall superiority of non-government schooling in any country (the dark blue bars). The observed superiority of non-government schools in the base data appears to be due to the students they enrol rather than what they do as schools.

Whether this is the case in Australia is unknown since the information distinguishing government and non-government schools in the Australia database is suppressed before it is submitted for international analysis. That practice should be changed.

Storyline so far...

There are marked performance differences among countries. Australian 15-year-olds perform relatively well but poorer performers are left further behind than in some countries.

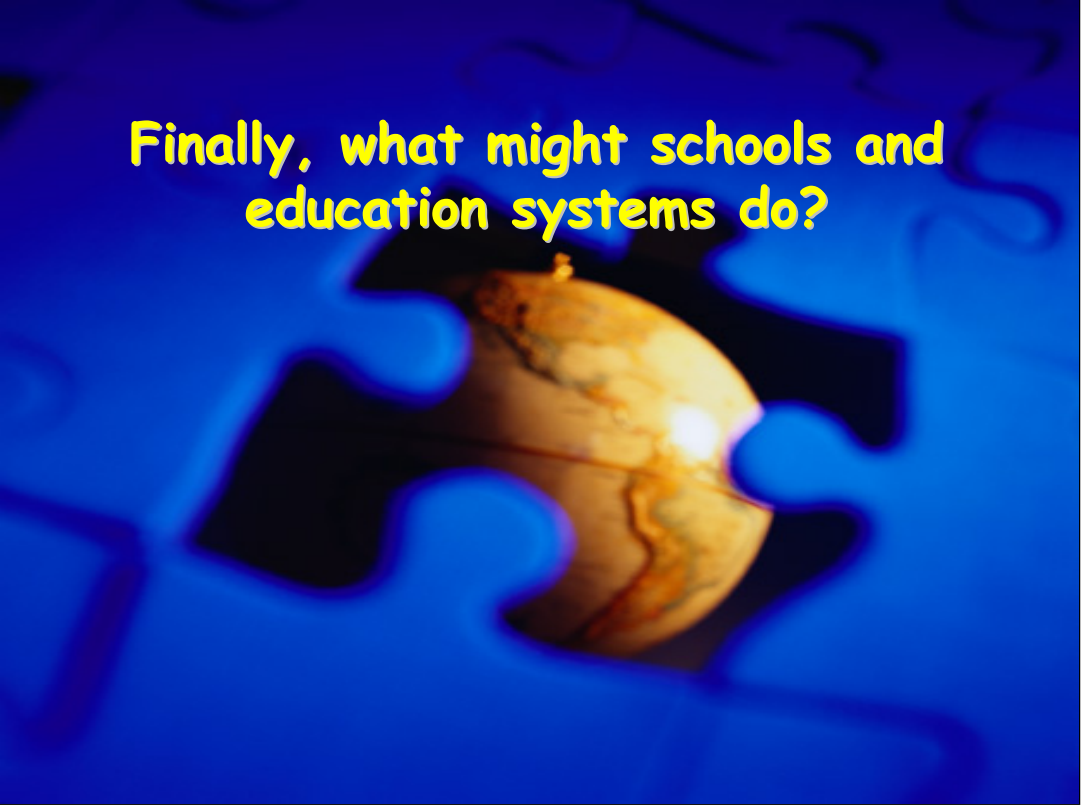
Students' social backgrounds are more strongly related to achievement in Australia than in countries such as Canada, Finland and Korea.

Schools differ little in some countries; where they do, much of difference can be explained by the social backgrounds of individual students and those whose company they keep. The negative effects of poor company may be much greater than any positive effect of good company.

Could social cohesion be threatened by a system that tends to confer privilege where it exists and so actively reproduces the status quo?

Social cohesion depends on building bridging social capital but what roles can schools play in building it?

**Finally, what might schools and
education systems do?**



Can we have it all - differentiation and cohesion?

□ South Australian examples

➤ Golden Grove

- Govt, Catholic & Anglican/Uniting secondary schools on site
- Shared library, senior science facilities, etc
- Schools have some specialties and students move
- One choir and annual musical for the three schools

➤ Mawson Lakes

- Primary school, university and city share Mawson Centre
- Primary school and public library combined in Centre
- Primary School principal housed in Centre with university Pro-Vice Chancellor and City administrator for the community.
- Primary school principal designated Director of Learning for the Community

While we might not know the real effects of the differentiation of the Australian education system, it is now a well-established fact of life. The notion of a community school, shared by the whole community, never was a reality in most of Australia and is becoming even less so. The question then is whether there are ways in which it would be possible to organise schools which are both differentiated and collaborating. There are examples in South Australia that date from the late 1980s and there are parallels developing in other places.

In Golden Grove, north-west of central Adelaide, there are three secondary schools on a single site: one government, one Catholic and one joint Anglican/Uniting Church. Their physical facilities are arranged around a core of common buildings that house shared library, senior science facilities and home economics and manual arts facilities. The Anglican/Uniting Church school has developed a specialty in music and the government school a specialty in technology. Students have the right to take courses not available in their own school in another in the complex. Funds change hands but the net flows are not large. There is one choir and one annual musical production for the three schools together.

In Mawson Lakes, a current development also north of central Adelaide, a government primary school, a Lutheran secondary school and a campus of the University of South Australia are essentially jointly located around the newly constructed Mawson Centre. The university is a majority owner of the Centre but the primary school and the City of Salisbury are joint minority owners. The primary school principal, the university Pro Vice-Chancellor and the city manager for the community are housed in the Centre and the school uses its elaborately equipped lecture theatre for its assemblies and other activities. The school and community libraries and their staff are integrated in a single facility in the Centre. The South Australian Department of Education and Children's Services has a staff member spending a considerable amount of time ensuring effective collaboration. The primary school principal has the formal, but not official title, Director of Learning for the Mawson Community, and seeks to play a role in meeting the needs of all learners, not just those of school age.

Meanwhile, the Lutheran secondary school sits to one side with a fence around it.

Can we have it all - differentiation and cohesion?

- Victorian example
 - Caroline Springs
 - Three primary schools on one site but Catholic school physically separated and oriented
 - Govt and non-govt secondary school on one site but only govt school sharing performing arts facility with city
- Role of Delfin in shaping these experiments
 - Accepting Australian policy of choice
 - Permitting differentiated schools, sometimes on same site
 - Facilitating early availability of choice in new communities
 - Potentially contributing to bridging social capital
 - Not guaranteed
 - Familiarity does not necessarily breed respect

The developing Caroline Springs community to the west of Melbourne also offers an example of differentiation with some collaboration. There is a single site with three primary schools on it: government, independent and Catholic. While all three collaborate in various ways, this is given stronger physical expression in the location and design of the buildings of the government and independent schools than the Catholic school.

Elsewhere in the development, a government and an independent secondary school are located on the same site where they share playing fields with the community as well. The government school and the local municipality combined resources to build a relatively large performing arts complex on the site. The independent school did not join in this venture for a variety of reasons, among them restrictions on the way in which it could use Commonwealth Government funding for facilities on land it does not own. It will have access on a fee-for-use basis.

There are other examples of this kind of collaboration between schools and also with co-located tertiary education and preschool and child care facilities but a common element in the three described – Golden Grove, Mawson Lakes and Caroline Springs – is the developer Delfin Lend Lease. In the interest of full disclosure, I acknowledge that I am currently engaged by them as a consultant for 3-4 days per month to help with the further development of the education model for their communities. I have chosen to do that because I think their developments offer an interesting and potentially very valuable, on-the-ground strategy for enhancing social capital and, through attention to the learning needs of people of all ages in the communities, also enhancing human capital generally.

Delfin Lend Lease clearly believes that communities with these characteristics are more valuable in the market in which they operate, but that is not my concern or interest. My interest is in the policy framework and the practices that might facilitate the exercise of choice enshrined in Australian educational provisions and at the same time develop models of collaboration across sectors and levels of education that could enhance social cohesion.

Co-location and sharing of resources provide no guarantee that bridging social capital will be built, since familiarity can breed disrespect as well as respect, but there is more chance than in isolation.

Storyline so far...

There are marked performance differences among countries. Australian 15-year-olds perform relatively well but poorer performers are left further behind than in some countries.

Students' social backgrounds are more strongly related to achievement in Australia than in countries such as Canada, Finland and Korea.

Schools differ little in some countries; where they do, much of difference can be explained by the social backgrounds of individual students and those whose company they keep. The negative effects of poor company may be much greater than any positive effect of good company.

Could social cohesion be threatened by a system that tends to confer privilege where it exists and so actively reproduces the status quo?

Social cohesion depends on building bridging social capital but what roles can schools play in building it?

Can co-location or other forms of collaboration between schools in different sectors help to build bridging social capital?

Emerging developments

- Government initiatives
 - Bracks' Third Wave of Reform
 - Document submitted for Council of Aust Govts (COAG)
 - Proposing new collaboration across levels of government
 - Says 'student needs and outcomes, not ownership of schools, should drive funding approaches.'
 - COAG - February 2006
 - Calls for reforms to enhance human capital development
 - By June 2006: principles, outcomes, progress measures
- Other voices/opportunities
 - NSW government school principals call for resource sharing with non-government sector
 - Snowy Scheme funds for education facilities
- Exciting times ahead?

There are some interesting new developments in Australia that offer the possibility of novel developments that might enhance the capacity of education systems to build human capital, enhance social capital and contribute to the development of social cohesion.

The Victorian Premier's document for the Council of Australian Governments (COAG) on a Third Wave of Reform calls for new national, collaborative action to further develop productivity in Australia (www.dpc.vic.gov.au/thirdwave). The COAG meeting in February 2006 acknowledged that its 'human capital agenda ... represents an ambitious partnership' and agreed that the next step would be 'to translate the broad reform agenda agreed to ... into clear measurable outcome and concrete actions', with initial proposals due by June 2006 (www.coag.gov.au). The human capital agenda in both cases takes a clear, lifelong learning perspective and is about raising the skill levels of all for participants in the modern Australian knowledge economy.

This will require collaboration across levels of government and also education sectors. Government school principals in New South Wales recently called for sharing of resources between the government and non-government schools (*Sydney Morning Herald*, 11 April 2006). The responses were "let's explore" (Catholic Education Commission), "as long as school identities are not compromised" (Christian Schools Australia), "only playing fields" (Sydney Anglican Schools Corporation) and "not at all" (NSW Teachers Federation). The issue of new forms of collaboration is on the agenda but much needs to be done to develop the idea and to work out practical implementation.

For Victoria the commitment of the dividend from the Snowy Scheme to the redevelopment of school facilities could also open interesting possibilities.

We could be moving into exciting times. I am pleased to have come back to Australia to share them with you.

Thank-you

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