Report shows impact of growing social stratification among Australian schools

Socio-economic status had a significant effect on the reading comprehension and mathematics test scores achieved by Australian 14-year-olds between 1975 and 1998, suggesting a growing difference between Australian schools along socio-economic lines.

This is among the key findings of the latest report in the Longitudinal Surveys of Australian Youth (LSAY) research program managed by the Australian Council for Educational Research (ACER) and the Commonwealth Department of Education, Science and Training.

The study examined student achievement scores on tests of reading comprehension and mathematics from five studies that tested the literacy and numeracy levels of 14-year-olds in Australian schools conducted between 1975 and 1998, as well as trends for all students, and for smaller groups of students. Students' results were discussed through examining means, medians and the distributions of results and changes over time. Results were reported by socioeconomic status, language background, gender and location.
Socio-economic status, as measured by parents' occupation, was found to have had a significant effect on the scores achieved by students. Throughout the 1975-1998 period, students whose parents were employed in professional and managerial occupations had the highest average scores and students whose parents were production workers or labourers had the lowest. Between 1975 and 1998, the gap between these two groups of students at an individual level narrowed.

However, at the same time, the gap in scores widened between schools with high concentrations of professional parents and all other schools.

"Although the overall achievement levels of students remained stable between 1975-1998, there are notable differences between students by socioeconomic status, both between individual students and between schools," said Deputy Director of ACER, Dr John Ainley.

"We found that within the same school a student who comes from a higher socioeconomic group will achieve better test results than a student from a lower socio-economic group. Likewise, students attending a school that has a higher concentration of students from higher socioeconomic groups will also achieve higher scores in both reading and mathematics than students attending schools with lower concentrations of students from higher socioeconomic groups. It is important to note that this school-level influence has increased since 1975," Dr Ainley said.

The report also found that there is a strong indication that, as a group, students from homes where English is not the main language spoken have improved their achievement both in reading comprehension and in mathematics. While the average achievement on tests of reading comprehension for students of a non-English speaking background was lower than the average for students from English speaking backgrounds, their achievement levels improved significantly over the period and the gap was narrowed substantially. For example, between 1975 and 1998 there was a decrease by about one-half in the difference in reading comprehension between students from homes where English is the main language spoken and students from homes where another language is spoken.
Other results include no significant differences recorded between students from non-metropolitan schools and students from metropolitan schools in both reading comprehension and mathematics; female students have higher achievement scores in reading comprehension but male students scored higher in mathematics; and the widest gaps in average test scores remained between Indigenous and non-Indigenous students for both reading comprehension and mathematics.

Further information is available in the report, Achievement in Literacy and Numeracy by Australian 14-year-olds, 1975-1998, by ACER researcher Dr Sheldon Rothman. The report is Research Report Number 29 in the Longitudinal Surveys of Australian Youth (LSAY) research program jointly managed by ACER and the Commonwealth Department of Education, Science and Training (DEST).

Print copies of the report may be purchased from ACER Press Tel: (03) 9277 5447; Fax: (03) 9560 4799; Email: (JavaScript must be enabled to view this email address). The report can be downloaded free of charge from the ACER web site.
Young Australians delay transitions to adulthood

Today’s young Australians are delaying their transition from education to full-time employment, from living at home to owning their own home, and from ‘singledom’ to marriage. These are among the findings of the recent ACER report *Becoming an Adult: Leaving Home, Relationships and Home Ownership Among Australian Youth*.

The report finds that young people are remaining in the parental home longer, a change that is more evident among young women than young men; they are choosing less formal de facto relationships more frequently and delaying their entry to marriage; are spending more time in rental accommodation; and are entering home ownership at decreasing rates.

The report focuses on three aspects of adulthood: moving out of home, establishing a relationship and buying a house. The report documents the incidence of these events over time and analyses their relationship with social background, demographic and labour market factors. The study uses data from the four Youth in Transition cohorts born in 1961, 1965, 1970 and 1975.

According to ACER Deputy Director Dr John Ainley, the report reveals that young people (under 25) are now making the transition to independent living at much older ages than in previous cohorts and there is some indication that a growing number of young people may not achieve the traditional markers of adulthood. ‘With a growing number of young people opting to delay marriage and the purchase of a home, this research indicates the possible existence of new markers of adulthood such as establishing a serious de facto relationship or entering rental accommodation.’

The report found that location and cultural background were two of the strongest influences on leaving home. Young people living in non-metropolitan areas were up to twice as likely to leave home as their metropolitan peers. Those whose parents were from a non-English speaking country were half as likely to leave as those whose parents were born in Australia. Young people who hold a university qualification were less likely to marry in the surveyed period (ages 19-25).
The research also found a very strong relationship between marriage and home ownership. Young people who were married were two to four times more likely to purchase a home than their unmarried peers.

Dr Ainley said that the report’s findings had a number of potential policy implications. 'We have found previously that the attainment of markers of adulthood has some bearing on the levels of well-being of young Australians. It is possible, therefore, that policies that delay the attainment of independence can also affect the life satisfaction and well-being of young Australians.'

_Becoming an Adult: Leaving Home, Relationships and Home Ownership Among Australian Youth_, by ACER researchers Ms Kylie Hillman and Dr Gary Marks, is Research Report Number 28 in the Longitudinal Surveys of Australian Youth research program, jointly managed by ACER and the Commonwealth Department of Education, Science and Training.

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Australian testing in TIMSS study complete

Around 12 000 students Australia-wide undertook testing of their maths and science achievement levels in late 2002 as part of the Trends in International Mathematics and Science Study (TIMSS) 2002/3 managed by ACER.

TIMSS is a large international study, involving around 400 000 students in 50 countries, designed to measure trends in students' knowledge and abilities in mathematics and science and to investigate the cultural environments, teaching practices, curriculum goals and institutional arrangements that are associated with achievement. First taking place in 1994/5, with follow-up studies in 1998/9 and 2002/3, the study provides the opportunity to analyse internationally comparable data in mathematics and science at both Year 4 and Year 8 levels.

The purpose of TIMSS Trends 2002/03 is to continue to monitor trends in mathematics and science at Year 8 level while measuring trends at Year 4 level for the first time. TIMSS Trends 2002/03 will also provide countries not previously participating in TIMSS an opportunity to collect TIMSS data.

The study is conducted under the auspices of the International Association for the Evaluation of Educational Achievement (IEA). The study in Australia has been agreed to by the Commonwealth and state and territory educational authorities. ACER is the National Centre for TIMSS Trends in Australia. A National Advisory Committee is monitoring the program and providing advice.

A sample of schools representing all school systems throughout the country was selected, using random sampling procedures, to represent Australia. One class at each level from each school was randomly selected to take part in the study. Year 4 and Year 8 in all states and territories participated. In addition, year 9 was also tested in Queensland, South Australia, Western Australia and the Northern Territory to maintain the trends from 1994 and 1998.

The level of participation of the selected schools determines whether Australia's results will be used in international comparisons. It was therefore very important that the schools took part in the study.
The participation was invaluable to the success of the Australian study.

Testing will begin early in 2003 in northern hemisphere countries and be completed by mid-year. The initial results of the project are expected to be published in 2004. Further information about the TIMSS study can be found on the ACER web site at

www.acer.edu.au/research
Advancing Literacy Learning

Approaches to literacy teaching and learning in Year 1 can have effects that last at least until Year 3. Children exposed to particular kinds of literacy teaching not only make greater progress in Year 1, but also display higher levels of literacy achievement by the end of Year 3. These are among the findings of recent research conducted by ACER into Literacy Advance, a reform strategy of literacy teaching and learning introduced in 1997 by the Catholic Education Commission of Victoria.
Making PISA results more accessible

All educators can take advantage of the information collected in an international study of reading, mathematical and scientific literacy.

The Programme for International Student Assessment (PISA) compared the reading, mathematical and scientific literacy performance of Australian 15-year-olds with the performance of 15-year-olds in 31 other countries, including the United States, Canada, Japan, Korea and many European nations including the UK and Russia. Some 265 000 students from 32 countries took part in the first PISA survey in 2000 in key areas thought to be essential for full participation in adult life. In Australia, 6200 students from 231 government, Catholic and independent schools in all states and territories took part.

Students answered a two-hour test and a background questionnaire about themselves, and principals answered a questionnaire about their schools. The student questionnaire collected background information on student and their learning environment, learning strategies and computer familiarity.

PISA was implemented for the OECD by a consortium of research organisations led by ACER in Melbourne. The Australian component of PISA was also implemented by ACER and was jointly funded by the Commonwealth, state and territory governments.

The results of the PISA 2000 study were released in December 2001 and there has been considerable international interest in the data from all sectors within the participating countries. The OECD engaged ACER to design and implement an innovative online data dissemination strategy. The data are now available on the internet in formats tailored to different potential users of the data.
Quick glance at the PISA data

This is designed for teachers, principals, researchers and students wanting to explore performance against background variables. The interactive data selection was developed to allow users to quickly determine literacy levels in reading, mathematics and science against one background variable from any country. Data can easily be accessed to investigate background variables such as gender, school location and a number of other student and school variables on the literacy levels in reading, mathematics and science. Data from the interactive website can be readily downloaded onto a local PC to allow for further manipulation and for presentation using desktop packages such as MS Excel.

Copies of the context questionnaires used to collect the background data can be downloaded from the site. When downloaded, these can be used to explore the data. A set of tables is displayed on the screen when questions and countries of interest are selected. The tables will show the percentage in each response category and the mean achievement in each of the three PISA assessment domains (reading, mathematical and scientific literacy).

A considered glance

This is designed for those wishing to explore relationships between variables. More complex analyses, with up to four variables in a range of countries, can also be requested. Results are specific to student performance in reading, mathematical or scientific literacy (only one selection is possible per request). The ACER server does this calculation and when the calculation is complete, the results are emailed back to the user. This service is provided free of charge.
The full dataset

This is suitable for professional statisticians and psychometricians. The PISA dataset contains many stories and will remain a major resource for social scientists in the years to come. To enable professionals to fully explore the data using cutting edge methodologies, the PISA data in its complete form is also available online.

Statisticians and professional researchers can download the PISA 2000 dataset with the full set of responses from individual students and school principals. The files available on this page include the questionnaires, the data files, the codebooks as well as SAS and SPSS control files in order to process the data. Researchers would require the appropriate technology and skills to analyse the data in its full potential.

The PISA report, 15-Up and Counting, Reading, Writing, Reasoning,...How Literate are Australia's Students? Is available on the ACER web site at PISA Reports and in hard copy from ACER Press - contact (JavaScript must be enabled to view this email address).
PISA study enters second cycle

The Programme for International Student Assessment (PISA) study will enter its second cycle of testing in 2003.

The Field Trial for the second cycle was undertaken in 2002, and in 2003, Australia will be one of 44 participating countries taking part in the Main Study. In Australia, approximately 300 schools will be invited to take part in the study, with 50 15-year-old students randomly selected per school. Each student will be asked to complete an assessment booklet and a questionnaire. A trained Test Administrator will carry out the test sessions with assistance from a staff member within each participating school.

PISA is sponsored by the Organisation for Economic Cooperation and Development (OECD). PISA assesses the skills and knowledge of 15-year-old students every three years in the learning domains of reading, mathematical and scientific literacy and problem solving. The study provides reliable indicators of educational outcomes of Australian students and compares these to the other participating countries.

Approximately 265,000 students from 32 countries participated in the first cycle of PISA, in 2000, and included almost 6,200 students from 231 Australian schools. A smaller number of students were involved in the Field Trial in the year prior.

A rigorous sampling procedure is employed and ensures representative samples of schools and 15-year-old students are selected. There are also strict requirements for achieving the specified response rates according to ACER’s National Director of the PISA project, Dr John Creswell. “A participation rate of at least 85 per cent of schools and 80 per cent of students is required. Failure to meet these conditions can exclude a country from being included in the international analyses and subsequently being reported in the International report. It is really important therefore that schools participate in the study,” Dr Creswell said.
In Australia, the Commonwealth Department of Education, Science and Training (DEST) has contracted ACER to undertake the survey. The project is jointly funded by the Commonwealth and the states.

The testing for PISA 2003 will take place in July and August. Schools that are randomly selected will be invited to participate during March.

**For further information:**
Further information regarding the PISA international study can be found at the [OECD web site](https://www.oecd.org). For further information regarding PISA 2003 in Australia please contact PISA National Project Director Dr John Creswell at ACER on 03 9277 5724 or by email at [view this email address](mailto:).
Educational research available online

Educational research findings are now accessible online through ACER’s Cunningham Library. EdResearch Online is an easily searchable database containing more than 12000 research articles and documents. The database contains bibliographical details and links to the full text of over 9000 (or 75%) articles and documents that are available free of charge on the World Wide Web. The full-text of a further 3000 (or 25%) journal articles for which copyright access has been negotiated are available on a fee-for-service basis.

The database contains over 6000 documents published from 2000 onwards. All of the journals subscribed to are Australian journals related to education research. Documents include journal articles, research reports, government reports, theses, conference proceedings and papers. Cunningham Library also now offers a Complete Article Service providing users with immediate access to scanned images of the full text of articles selected from 120 Australian journals on a fee-per-use basis to cover copyright and processing costs.

Cunningham Library Manager Ms Margaret Findlay describes the service as a breakthrough. 'Many of the articles available through EdResearch Online would otherwise be available only by subscribing to the journals or purchasing a copy of an article through an inter-library loan. EdResearch Online allows users to immediately download copies of the articles they are looking for,' Ms Findlay said.

'We are now able to offer a virtual library online. The library catalogue and a database of higher research theses are all there along with the ability to download journal articles on demand. These services provide easier access to Australian research information and are in keeping with ACER’s objective of making research findings more accessible to the education community.'

Interest in the service has increased rapidly since it was launched in mid 2001, with most hits on the site originating in the United States. Some 280 educational institutions around the world, including many leading universities, have established links from their own websites to EdResearch Online.
For further information about the Cunningham Library and its range of services, including details of the Library Membership Services or EdResearch Online, visit the library's website at

www.acer.edu.au/library

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