Girls outperform boys in PISA 2009+ participant economies

On Friday 16 December ACER released the OECD Programme for International Student Assessment (PISA) 2009+ results for ten economies.

PISA is an international comparative survey of 15-year-olds’ knowledge and skills in reading, mathematical and scientific literacy, conducted by ACER. It measures how well young adults have acquired the knowledge and skills that are required to function as successful members of society.

Sixty-four economies originally participated in PISA 2009. Ten additional partner participants, who were unable to participate within the PISA 2009 project timeframe, participated in the PISA 2009 study on a reduced and delayed timeline in 2010. This is known as the PISA 2009+ project.

ACER CEO, Professor Geoff Masters, said the results found that in the PISA 2009+ economies, girls significantly outperformed boys in reading (reflecting the PISA 2009 results).

“Girls not only tended to attain higher reading scores than boys, they were also more aware of strategies for understanding, remembering and summarising information,” Professor Masters said.

“Students who are highly aware of effective strategies for learning who also regularly read a wide range of material, tend to demonstrate better reading proficiency than those who either have a lower awareness of effective strategies or read a narrower range of materials regularly.”
Professor Masters said that while school level factors account for a considerable proportion of variation in reading performance between schools, much of this is associated with socioeconomic and demographic factors.

“This suggests that policies around governance, accountability, the investment of educational resources and the overall learning environment are influenced by the social and demographic intake of the school,” Professor Masters said.

“Schools containing students with higher socioeconomic backgrounds, tend to be more autonomous in their decision about curriculum, make more of assessments for accountability purposes, have better student-teacher relationships, and utilise more educational resources. Students attending these schools have better educational outcomes.”

The results also showed both girls and boys from the PISA 2009+ nations had results in reading, mathematical and scientific literacy that were lower than the OECD average.

The results reveal the following highlights for each PISA 2009+ participants:

**Costa Rica**

- Students in Costa Rica attained an average score on the PISA reading literacy scale the same as that observed for one OECD country, Chile, and was significantly higher than that for one other country, Mexico. The average reading score for Costa Rica was statistically the same as those for Bulgaria, Malta and Serbia.
- Just over two-thirds of students in Costa Rica are estimated to have a proficiency in reading literacy that is at or above the baseline needed to participate effectively and productively in life. This compares to 81% in the OECD countries, on average.
- While in Costa Rica girls outperformed boys in reading, the difference was among the lowest in magnitude of all PISA 2009 and PISA 2009+ participants.
Costa Rican students attained an average score on the mathematical literacy scale below the average attained in all OECD countries. 43% of students in Costa Rica are proficient in mathematics at least to the baseline level at which they begin to demonstrate the kind of skills that enable them to use mathematics in ways that are considered fundamental for their future development. This compares to 75% in the OECD countries, on average.

Costa Rican students were estimated to have an average score on the scientific literacy scale which was significantly higher than that estimated for the lowest scoring OECD country, Mexico. 61% of students are proficient in science at least to the baseline level at which they begin to demonstrate the science competencies that will enable them to participate actively in life situations related to science and technology. This compares to 82% in the OECD countries, on average.

Georgia

Georgia’s students attained an average score on the reading literacy level below the average attained in all OECD countries. Georgia’s average score was below the average attained in all OECD countries. Georgia’s average score is the same as those of Qatar, Peru and Panama. 38% of students in Georgia are estimated to have a proficiency in reading literacy that is at or above the baseline needed to participate effectively and productively in life. The majority of students therefore perform below the baseline level of proficiency in reading.

Georgia’s students attained an average score in the mathematical literacy scale below the average of all OECD nations. In Georgia, 31% of students are proficient in mathematics at least to the baseline level at which they begin to demonstrate the kind of skills that enable them to use mathematics in ways that are considered fundamental for their future development. This compares to 75% in the OECD countries, on average. In Georgia, there was no statistically significant difference in the performance of boys and girls in mathematical literacy.
Georgian students were estimated to have an average score on the scientific literacy scale below the average of all OECD countries. In Georgia, 34% of students are proficient in science at least to the baseline level at which they begin to demonstrate the science competencies that will enable them to participate actively in life situations related to science and technology. This compares to 82% in the OECD countries, on average. In Georgia, there was a statistically significant gender difference in scientific literacy, favouring girls.

**Himachal Pradesh-India**

- The average reading literacy score for Himachal Pradesh-India was the lowest average reading score observed in PISA 2009 and PISA 2009+, along with that of Kyrgyzstan.
- In Himachal Pradesh-India, 11% of students are estimated to have a proficiency in reading literacy that is at or above the baseline needed to participate effectively and productively in life. It follows that 89% of students in Himachal Pradesh-India are estimated to be below this baseline level. This compares to 81% of student performing at or above the baseline level in reading in the OECD countries, on average.
- In Himachal Pradesh-India, students attained an average score on the mathematical literacy scale statistically the same as observed in Tamil Nadu-India and Kyrgyzstan. 12% of students are proficient in mathematics at least to the baseline level at which they begin to demonstrate the kind of skills that enable them to use mathematics in ways that are considered fundamental for their future development. This compares to 75% in the OECD countries, on average.
- Himachal Pradesh-India’s students were estimated to have an average score on the scientific literacy scale which is below the means of all OECD countries. This was the lowest average science score observed in PISA 2009 and PISA 2009+, along with that of Kyrgyzstan.
Himachal Pradesh-India’s students were estimated to have an average score on the scientific literacy scale which is below the average of all OECD countries. 11% of students are proficient in science at least to the baseline level at which they begin to demonstrate the science competencies that will enable them to participate actively in life situations related to science and technology. This compares to 82% in the OECD countries, on average.

Malaysia

Students in Malaysia attained an average score on the PISA reading literacy scale that was below the average attained in all OECD countries and equivalent to the average scores estimated for Brazil, Colombia, Miranda-Venezuela, Montenegro, Thailand, Trinidad and Tobago. In Malaysia, 56% of students are estimated to have a proficiency in reading literacy that is at or above the baseline needed to participate effectively and productively in life. This compares to 81% in the OECD countries, on average.

Students in Malaysia attained an average score on the mathematical literacy scale below the average attained in all OECD countries. In Malaysia, 41% of students are proficient in mathematics at least to the baseline level at which they begin to demonstrate the kind of skills that enable them to use mathematics in ways that are considered fundamental for their future development. In Malaysia, there was no statistically significant difference in the performance of boys and girls in mathematical literacy.

Malaysian students were estimated to have an average score on the scientific literacy scale that was significantly higher than that estimated for the lowest scoring OECD country, Mexico.

In Malaysia, 57% of students are proficient in science at least to the baseline level at which they begin to demonstrate the science competencies that will enable them to participate actively in life situations related to science and technology. This compares to 82% in the OECD countries, on average.

In Malaysia, there was a statistically significant gender difference in scientific literacy, favouring girls.
Malta

- Malta’s students were estimated to have an average score significantly higher than for the lowest performing OECD country, Mexico. The Maltese average was statistically the same as those for Serbia, Costa Rica and Bulgaria.
- In Malta, girls significantly outperformed boys and have the largest gender gap in reading across all 74 PISA 2009 and PISA 2009+ participants.
- 64% of students in Malta are estimated to have a proficiency in reading literacy that is at or above the baseline needed to participate effectively and productively in life. This compares to 81% in the OECD countries, on average. Malta is notable among PISA 2009+ participants in that it has a relatively large proportion of advanced readers but also a relatively large proportion of poor and very poor readers in the population.
- The Maltese students’ estimated mathematical literacy average was the same as that estimated for students from Greece, and higher than those from the OECD countries Israel, Turkey, Chile and Mexico. In Malta, 66% of students are proficient in mathematics at least to the baseline level at which they begin to demonstrate the kind of skills that enable them to use mathematics in ways that are considered fundamental for their future development. This compares to 75% in the OECD countries, on average.
- In Malta, there was a statistically significant gender difference in mathematical literacy, favouring girls.
- Maltese students were estimated to have an average score on the scientific literacy scale that was statistically the same those observed in the OECD countries Turkey and Israel and significantly higher than those estimated for two other OECD countries, Chile and Mexico.
- In Malta, two-thirds of students are proficient in science at least to the baseline level at which they begin to demonstrate the science competencies that will enable them to participate actively in life situations related to science and technology.
- In Malta, there was a statistically significant gender difference in scientific literacy, favouring girls. This was the largest gender gap in scientific literacy among all PISA 2009 and PISA 2009+ participants, along with those observed in Jordan and the United Arab Emirates.
Mauritius

- Students in Mauritius attained an average score on the PISA reading literacy scale below the average attained in all OECD countries and equivalent to the average scores estimated for Argentina, Brazil, Colombia, Indonesia, Jordan Montenegro and Tunisia.
- In Mauritius, 53% of students are estimated to have a proficiency in reading literacy that is at or above the baseline needed to participate effectively and productively in life. This compares to 81% in the OECD countries, on average. Students in Mauritius attained an average score on the mathematical literacy scale that was the same as those observed in the two lowest performing OECD countries, Chile and Mexico.
- In Mauritius, 50% of students are proficient in mathematics at least to the baseline level at which they begin to demonstrate the kind of skills that enable them to use mathematics in ways that are considered fundamental for their future development. This compares to 75% in the OECD countries, on average.
- There was no statistically significant difference in Mauritius in the performance of boys and girls in mathematical literacy.
- Students in Mauritius were estimated to have an average score on the scientific literacy scale which is statistically the same as that observed in the lowest scoring OECD country, Mexico.
- In Mauritius, 53% of students are proficient in science at least to the baseline level at which they begin to demonstrate the science competencies that will enable them to participate actively in life situations related to science and technology. This compares to 82% in the OECD countries, on average.
- There was a statistically significant gender difference in scientific literacy, favouring girls.

Miranda-Venezuela

- Students within state funded public schools and private schools within the state of Miranda, Venezuela, achieved an average score on the PISA reading literacy scale as that observed in one OECD country, Mexico. It is also equivalent to those observed in Brazil,
Bulgaria, Colombia, Malaysia, Romania, Thailand, Trinidad and Tobago, the United Arab Emirates and Uruguay.

• In Miranda-Venezuela, girls significantly outperformed boys in reading, but the difference was among the lowest in magnitude of all PISA 2009 and PISA 2009+ participants.

• 58% of students in Miranda-Venezuela are estimated to have a proficiency in reading literacy that is at or above the baseline needed to participate effectively and productively in life. This compares to 81% in the OECD countries, on average. Students in Miranda-Venezuela attained an average score on the mathematical literacy scale that is below the average attained in all OECD countries. In Miranda-Venezuela, 40% of students are proficient in mathematics at least to the baseline level at which they begin to demonstrate the kind of skills that enable them to use mathematics in ways that are considered fundamental for their future development.

• Students in Miranda-Venezuela were estimated to have an average score on the scientific literacy scale that is statistically the same as that observed in the lowest scoring OECD country, Mexico.

• In Miranda, 57% of students are proficient in science at least to the baseline level at which they begin to demonstrate the science competencies that will enable them to participate actively in life situations related to science and technology. This compares to 82% in the OECD countries, on average.

• In Miranda-Venezuela, there was no statistically significant difference in the performance of boys and girls in scientific literacy.

Moldova

• Students in Moldova attained an average score on the PISA reading literacy scale below the average attained in all OECD countries and equivalent to the mean scores estimated for Albania, Argentina and Kazakhstan.

• In Moldova, 43% of students are estimated to have a proficiency in reading literacy that is at or above the baseline needed to participate effectively and productively in life. The majority of students do not perform at the baseline level of proficiency in reading.
Students in Moldova attained an average score on the mathematical literacy scale that is below the average attained in all OECD countries. In Moldova, 39% of students are proficient in mathematics at least to the baseline level at which they begin to demonstrate the kind of skills that enable them to use mathematics in ways that are considered fundamental for their future development. This compares to 75% in the OECD countries, on average. There was no statistically significant difference in the performance of boys and girls in mathematical literacy.

Students in Moldova were estimated to have an average score on the scientific literacy scale that is statistically the same as that observed in the lowest scoring OECD country, Mexico. In Moldova, 53% of students are proficient in science at least to the baseline level at which they begin to demonstrate the science competencies that will enable them to participate actively in life situations related to science and technology. This compares to 82% in the OECD countries, on average. There was a statistically significant gender difference in scientific literacy, favouring girls.

Tamil Nadu-India

Students in Tamil Nadu-India attained an average score on the PISA reading literacy scale that is significantly higher than those for Himachal Pradesh-India and Kyrgyzstan, but lower than all other participants in PISA 2009 and PISA 2009+.

In Tamil Nadu-India, 17% of students are estimated to have a proficiency in reading literacy that is at or above the baseline needed to participate effectively and productively in life. This means that 83% of students in Tamil Nadu-India are estimated to be below this baseline level. This compares to 81% of student performing at or above the baseline level in reading in the OECD countries, on average.

Students in the Tamil Nadu-India attained a mean score on the PISA mathematical literacy scale as the same observed in Himachal Pradesh-India, Panama and Peru. This was significantly higher than the mean observed in Kyrgyzstan but lower than those of other participants in PISA 2009 and PISA 2009+. 
In Tamil Nadu-India, 15% of students are proficient in mathematics at least to the baseline level at which they begin to demonstrate the kind of skills that enable them to use mathematics in ways that are considered fundamental for their future development. This compares to 75% in the OECD countries, on average. In Tamil Nad-India, there was no statistically significant difference in the performance of boys and girls in mathematical literacy.

Students in Tamil Nadu-India were estimated to have a mean score on the scientific literacy scale, which is below the means of all OECD countries, but significantly above the mean observed in the other Indian state, Himachal Pradesh. In Tamil Nadu-India, 16% of students are proficient in science at least to the baseline level at which they begin to demonstrate the science competencies that will enable them to participate actively in life situations related to science and technology. This compares to 82% in the OECD countries, on average. In Tamil Nadu-India, there was a statistically significant gender difference in scientific literacy, favouring girls.

The United Arab Emirates

Dubai participated as a separate economy in PISA 2009. The remaining emirates of the United Arab Emirates participated in PISA 2009+. Dubai’s data were merged with that of the remaining emirates and they are reported as a single entity: the United Arab Emirates.

Students in the United Arab Emirates attained an average score on the PISA reading literacy scale, the same as that observed in one OECD country, Mexico. It is also equivalent to those observed in Bulgaria, Miranda-Venezuela, Romania and Uruguay.

60% of students in the United Arab Emirates are estimated to have a proficiency in reading literacy that is at or above the baseline needed to participate effectively and productively in life. This compares to 81% in the OECD countries, on average.
Students in the United Arab Emirates attained an average score on the PISA mathematical literacy scale that is statistically the same as those observed in the two lowest performing OECD countries, Chile and Mexico. In the United Arab Emirates, 49% of students are proficient in mathematics at least to the baseline level at which they begin to demonstrate the kind of skills that enable them to use mathematics in ways that are considered fundamental for their future development. In the United Arab Emirates, there was a statistically significant gender difference in mathematical literacy, favouring girls.

Students in the United Arab Emirates were estimated to have an average score on the scientific literacy scale that was significantly higher than that estimated for the lowest scoring OECD country, Mexico.

In the United Arab Emirates, 61% of students are proficient in science at least to the baseline level at which they begin to demonstrate the science competencies that will enable them to participate actively in life situations related to science and technology. This compares to 82% in the OECD countries, on average.

In the United Arab Emirates, there was a statistically significant gender difference in scientific literacy, favouring girls. This gender gap was the largest observed in scientific literacy among all PISA 2009 and PISA 2009+ participants, along with those observed in Jordan and Malta.

To download the PISA 2009+ report, go to: https://mypisa.acer.edu.au/
Study finds gambling prevalent among young Australians

The first national study of gambling among young people in Australia has revealed that the majority of 10–24-year-olds have participated in a gambling activity at least once in the year just passed.

ACER was commissioned to undertake the study by the Victorian Department of Justice on behalf of Gambling Research Australia (GRA). The purpose of the research was to describe the current gambling behaviour of young people and to analyse how gambling is similar to, or distinct from, other risk-taking behaviours. It also sought to identify and analyse the differences between young people who become problem gamblers from those who do not develop a problem, and sought to determine possible risk inhibitors and risk enhancers relevant to gambling for young people.

More than 5600 young people participated in the study. Half (50.7 per cent) of the participants were aged between 18 and 24, 27.3 per cent between 15 and 17, and 22 per cent between 10 and 14.

The study found that overall, 77 per cent of young people had participated in a gambling activity at least once in the 12 months just passed. There were some difference according to age, with 76 per cent of 10–14-year-olds, 64 per cent of 15–17 year olds, and 85 per cent of 18–24-year-olds having gambled at least once in the previous year.

Of those who said they had gambled at least once in the previous year, 56 per cent were classified as social gamblers, 16 per cent as at-risk gamblers and five per cent as problem gamblers. Males were more likely to be at-risk or problem gamblers than females, with 5.7 per cent of males being problem gamblers compared to 3.2 per cent of females, and 19.1 per cent of males classified as at-risk gamblers compared to 13.9 per cent of females.
On average, problem gamblers reported participating in eight different types of gambling activities, while at-risk gamblers reported five different activities and social gamblers three. The most common gambling activities among young people overall were the purchase of instant prize-tickets or scratch cards (80 per cent), playing card games at home or in the homes of friends or relatives (77 per cent), purchase of lottery tickets (74 per cent) and participation in football tipping competitions (67 per cent).

Overall, 64 per cent of young people indicated that they had used poker machines, 62 per cent played casino games other than cards and 59 per cent played card games in a casino. Importantly, not all of these people were over 18 years old – five per cent of 10–14-year olds reported that they had played card games in a casino and 7.6 per cent other games in a casino.

The young people who participated in the focus group sessions that formed part of this study generally believed that gambling activities were in some way harmful. However, activities such as the purchase of a lottery ticket, placing a wager on the Melbourne Cup and the purchase of raffle tickets for charitable events were not viewed negatively, rather they were viewed as culturally accepted and, in some cases, expected.

Positive attitudes to gambling and low self-esteem were identified as two factors associated with problem gambling. The report suggests that targeting these factors, as well as young people’s understanding of what constitutes gambling and their perceptions about gamblers, will play an important part in developing intervention procedures aimed at reducing levels of youth gambling in Australia.

The full report, *Gambling and Young People in Australia* by ACER researchers Nola Purdie, Gabrielle Matters, Kylie Hillman, Martin Murphy and Clare Ozolins, and Pam Millwood from Wallis Consulting Group, is available from the [Gambling Research Australia website](http://www.grara.org.au).
Higher education student engagement under the microscope

Higher education experts and stakeholders from Australia, New Zealand, Singapore, Malaysia and Oman gathered in Melbourne in November to discuss challenges around student engagement and share strategic insights to further improve the quality of higher education.

ACER presented a two-day conference on student engagement in collaboration with Criterion Conferences. The topic of the conference was timely, as recent developments such as the advent of TEQSA have brought the intersection of teaching, learning and student engagement to the fore, while ambitious national participation targets and the resulting need for a significant increase in student retention mean that student engagement is more vital than ever.

"Eight years ago people in the higher education sector would say they are not responsible for student engagement, but I don’t hear that any more" ACER Higher Education Research Director, Associate Professor Hamish Coates, told delegates.

Associate Professor Coates delivered a presentation on the topic of international and national perspectives on measuring student engagement and outcomes. He said that as the stakes get higher, there is a need to put more emphasis on the quality of the data.

The conference encouraged discussion of the definition of student engagement. Associate Professor Coates said it needs to be defined in a global context. Professor Richard James from the Centre for the Study of Higher Education at The University of Melbourne warned that, if we don’t define what we mean by engagement, we risk not knowing whether we are achieving it. Professor Sid Nair from the University of Western Australia told delegates that student engagement is shaped by student judgement rather than being defined by universities.

Representatives from the National Union of Students, the Council of Australian Postgraduate Associations, the Australian Federation of International Students and the Council of International Students Australia participated in a student panel discussion to provide insight into what students believe are the key elements of a positive student experience of higher education. Some of the suggestions raised included holding student-run events and encouraging students to spend more time on campus by providing high-quality facilities and services as well as recreation opportunities.
For post-graduate students, it was suggested that bookable desks replace ‘hot desks’. For international students, it was suggested that the needs of international and domestic students need to be met without segregating one group from the other.

In his presentation on the economics of student engagement, Professor Ross Milbourne from the University of Technology, Sydney, said there is a concern that the linking of funding to completions may lead to universities selecting students and courses based on how likely they are to leave before completion. He pointed to evidence that international students and female students are less likely to leave before completion, while indigenous students are more likely to do so.

Professor Milbourne also highlighted the cost to the economy of non-completion. He said that, as the lifetime earnings of a university graduate are around $1.5 million more than a school leaver with no further qualifications, every attrition potentially costs the economy $1.5 million.

The conference, on the theme Measuring & Improving Student Engagement & Experience: Increasing the quality of teaching & learning to encourage retention in higher education, was held at the Novotel on Collins, Melbourne, from 22-23 November 2011.

Further information, including the full conference program and list of speakers, is available from http://www.improvingstudentengagement.com/.
Post-school destinations: expectation vs. reality

An ACER report on the expected and achieved post-school destinations of NSW secondary students released in November shows that students’ expectations for university study are substantially higher than the actual proportions that pursue university education in the year after leaving school. It also revealed that, while students and their parents share similar expectations for university study, teachers hold lower expectations.

Commissioned by the NSW Board of Vocational Education and Training and facilitated by the NSW Department of Education and Board of Studies, the report was based on a representative survey conducted in late 2010 of approximately 6100 NSW students who were in Years 10, 11 and 12 in 2009. Parents and teachers also participated in the study.

The survey revealed that almost 70 per cent of students surveyed expected to study at university after leaving school. In contrast about 42 per cent of young persons who left school in 2009 were at university in 2010. The proportion of Year 12 graduates from 2009 attending university in 2010 was around 48 per cent.

The report authors note that, while the incidence of university study would be somewhat higher if reported on two or three years after leaving school, the final proportion that attended university would still be substantially lower than the proportion expecting university study during senior secondary school.

Parents’ shared similar expectations to their children, with around 65 per cent reporting they expect their child will attend university. Teacher expectations for university study were substantially lower, at around 35 per cent.

It is important to note that, in this study, student and parent expectations for post-school study are not strictly comparable with teacher expectations. This is because teachers were asked to nominate the approximate percentages that in six months time will have begun an apprenticeship or traineeship, started university or a TAFE course, be working, unemployed or other. In contrast, students and their parents were asked about university or vocational study for an individual student any time in the future.
The expectations of students and their parents are in part aspirations, whereas teachers simply report what they understand as the likely destinations based on knowledge of previous cohorts.

The expectations for vocational study are lower than the actual levels of participation. Around 22 per cent of students, 14 per cent of their parents and 15 per cent of teachers expect them to pursue vocational study or training other than university study. Overall, about 24 per cent of people who left school in 2009 were in vocational education and training in 2010, including study at a TAFE Institute or private provider, or as part of an apprenticeship or traineeship.

According to the report authors, these findings most likely reflect the higher status that students and their parents view university courses with compared to vocational courses, as students and their parents naturally aspire to the more highly valued outcome.

The full report, *Career Moves: Expectations and Destinations of NSW Senior Secondary Students* by ACER Researchers Gary Marks, Catherine Underwood, Sheldon Rothman and Justin Brown, is available from: [http://research.acer.edu.au/transitions_misc/11/]
ACER Update

Explicit School Improvement seminar

In January 2012, ACER Chief Executive Professor Geoff Masters will present a one-day seminar on *Explicit School Improvement: An evidence-based framework for action*. The seminar will focus on the Teaching and Learning School Improvement Framework (TaLSIF), an evidence-based tool developed by ACER with Education Queensland to address the need for detailed, objective measurement of school practices in areas shown by international research to have a direct impact on teaching and learning outcomes. In 2010 Education Queensland began using the TaLSIF in a state-wide audit process to measure, monitor and drive school improvement across the system. The seminar will provide both the theory behind the development of the TaLSIF and practical advice about its use gained from over two thousand Education Queensland school audits. Professor Masters will be joined by co-presenters Mr Tony McGruther (Manager of Leadership Programs, ACER) and Mr Mark Campling (Assistant Director-General (School Performance), Education Queensland). The seminar takes place on Wednesday 25 January 2012 at the Amora Hotel, Sydney.

First national conference on Adult Language, Literacy and Numeracy Assessment

In response to increasing national and state interest in addressing and improving the Language, Literacy and Numeracy (LLN) skills of Australian workers and vocational education and training (VET) participants, ACER will present the inaugural National Adult English Language, Literacy and Numeracy Assessment Conference in Melbourne on 4 May 2012. Designed for managers and co-ordinators of training and learning in both industry and the VET sector, the conference will highlight local and international research in this area and present practical solutions and expertise from within industry and VET. Presentations will cover the main topics and research regarding the LLN skills of the Australian adult population from an industry and training perspective as well as practical issues such as identifying and assessing LLN skills and supporting learners and trainees in improving their LLN skills.
Two half-day pre-conference workshops will address the 2011 Australian Core Skills Framework and item writing for adult literacy and numeracy assessments. For further information including a list of speakers please visit http://www.acer.edu.au/nallnac/.

Season's greetings from ACER

The management and staff of ACER wish you all the best for the festive season. Please note that our offices will be closed from Saturday 24 December to Monday 2 January inclusive.