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Preparing 21st Century Learners: The Case for School-Community Collaborations

Support from those beyond the school gates is an essential part of preparing learners for the twenty-first century, ACER Principal Research Fellow Dr Michele Lonsdale and ACER Senior Research Fellow Dr Michelle Anderson argue in the latest in a series of research-based, expert opinion articles.

The ACER Occasional Essays series aims to provide thought leadership that can create a positive impact on learners and their needs, on the learning profession and on places of learning, and fosters a learning society in which every learner experiences success and has an opportunity to reach their potential.
Student understanding of food and fibre origins

Primary Industry plays a vital role in Australia’s economy and society. However, there is concern that the gap between rural and urban communities is growing, and that this may be contributing to a lack of understanding among our young people of where food and other basic necessities of life come from.

In 2010, the Primary Industries Education Foundation contracted ACER to design and conduct a baseline survey of students and teachers to find out what they know about primary industries in Australia, focusing on where food and fibre products come from. The survey was conducted from June to October 2011 and involved the participation of 213 Grade 6 students, 687 Grade 10 students and 53 teachers from 71 schools.

Most of the students surveyed exhibited positive attitudes towards agriculture and farming, believing that farmers take care of the soil and their animals. However some students also believed that farming put wildlife at risk, with one-third of students responding that wildlife are unable to survive in farming areas.

When it came to understanding the origins of food and fibre, the results were quite positive, with the majority of students being able to name wheat and wool products, identify the stages in transferring fruit from an orchard to the home, or identify a product as plant-based or animal. However, both Grade 6 and Grade 10 students appeared to have difficulty in identifying cotton socks as being a plant product, with only 25 per cent of Grade 6 students and 58 per cent of Grade 10 students classifying it as such.

More than three quarters of Grade 6 and Grade 10 students correctly identified wool, cotton wool and sugar as items that grow and plastic and glass as items that are made. Interestingly, the majority of both Grade 6 and Grade 10 students incorrectly identified cardboard as something that started out in a factory or laboratory, rather than recognising that it starts out as a plant and is thus grown.

All of the responding primary school teachers saw knowledge and understanding of food and fibre production as at least somewhat important for young Australians today. Over half of the secondary teachers saw this knowledge and understanding as being very important for their students. Yet levels of familiarity among teachers with issues related to Primary Industries were not high, particularly in Fisheries, with very few of the teachers surveyed studying subjects related to Primary Industries while they were at university.

The report recommends that Primary Industry-focused resources and professional development opportunities may assist teachers to develop the knowledge and understanding needed to educate their students. In terms of extra or co-curricular activities, school garden programs appear to be popular and well-established among responding teachers. The report recommends using these as a platform for promoting participation in other Primary Industry-related activities, such as farm visits, competition in local Agricultural Shows and visits to local production facilities or factories, to extend students’ knowledge of the entire food production line.
The full report, *Food, Fibre and the Future: Report on surveys of students’ and teachers’ knowledge and understanding of Primary Industries* by ACER Senior Research Fellow Ms Kylie Hillman and ACER Research Fellow Dr Sarah Buckley, is available from

http://research.acer.edu.au/national_surveys/1/
Business potential lies untapped in schools

A focus on education business management is key to improving student outcomes, according to the author of an ACER Press book launched in March.

In *Above and Beyond the Bottom Line: The extraordinary evolution of the education business manager*, Deakin University's Professor Karen Starr argues 'business' can no longer be seen as a dirty word in education.

'Education is big business. Globally, it is a multibillion dollar industry employing millions of people,' Professor Starr said, speaking ahead of the launch.

'And in Australia, like it or not, government policy changes have made educational institutions more businesslike.

'If business is not well managed within education systems and institutions, education itself suffers,' she said.

Building on research and interviews with education business managers, *Above and Beyond the Bottom Line* is the first book in Australia to explore the extent of school business and how it is conducted.

The book reports 'an enormous waste of untapped business potential' and suggests schools could be run more effectively with greater autonomy and dedicated business management staff.

'Schools are in the not-for-profit sector, but governments and the public are demanding greater accountability for education spending and improved educational standards: essentially, more for less. This is possible only where educational institutions have strong leaders supported by effective business professionals,' Professor Starr said.

The book argues that employing business managers is not an additional cost to the education system, as business managers achieve savings and attract extra funds to schools, generating a substantial return on the investment of their salaries, and free up principals and educators to focus on teaching and learning.

Professor Karen Starr is the Foundation Chair in School Development and Leadership at Deakin University, and runs the Leadership for Business Managers training course for the Department of Education and Early Childhood Development.

*Above and Beyond the Bottom Line* (ACER Press, 2012) was launched at NAB Docklands in Melbourne on 8 March 2012. Print copies can be purchased from the ACER Online Shop or by contacting customer service on 1800 338 402 or via email to *[this email address](mailto:)*.
Parents urged to develop maths in kids from birth

Parents, grandparents and early childhood educators should use play time to help develop mathematical concepts in young children, advise the authors of a new book published by ACER.

In *Young children learning mathematics: A guide for educators and families*, Australian academics Robert Hunting, Judy Mousley and Bob Perry explore how adults can stimulate young children’s mathematical thinking from birth through to when they start school.

'Early learning plays a critical role in laying a foundation for later success in schooling,' Dr Hunting said, speaking ahead of the book’s release.

'But we need to make sure that learning is fun and rewarding,' he said.

The book details a rich variety of mathematical concepts that may be developed in young children, such as arranging, sorting, comparing quantities, counting, filling and emptying, joining, matching, patterning, splitting and sharing.

'There are great opportunities for astute adults, be they teachers, carers or parents, to recognise moments in a child’s play, social interactions and everyday situations when embryonic mathematical thinking might be stimulated,' Dr Hunting said.

'For example, infants placing toys one at a time into a container and then taking them back out again are developing skills needed later in life to add and subtract,' he said.

The book advises adults on how to engage with children as they play and ask sensible, supportive and open-ended questions to provoke children’s thinking and extend their investigations.

'All children begin their lives ready to learn mathematics. The trick is to keep the flames fanned and burning brightly,' Dr Hunting said.

A research-based book, *Young Children Learning Mathematics* assists early childhood teachers and carers to apply some of the requirements of the new Early Years Learning Framework that came into effect at the beginning of 2012. The book is also relevant to parents and grandparents who wish to ensure their child feels good about mathematics.

Robert Hunting is a Senior Lecturer in Mathematics Education at La Trobe University. Judy Mousley is an Associate Professor at Deakin University. Bob Perry is a Professor of Education at Charles Sturt University.

*Young children learning mathematics* (ACER Press, 2012) was released on 1 March. Print copies can be purchased from the [ACER Online Shop](http://www.acer.org.au) or by contacting customer service on 1800 338 402 or via email to [info@acer.org.au](mailto:info@acer.org.au).
LLEAP Celebrate & Learn Forum

The Leading Learning in Education and Philanthropy (LLEAP) project is helping to shed light on some important questions that have long plagued those looking to form partnerships between the education, philanthropic and non-profit sectors. Noted historian and governor of The Ian Potter Foundation, Professor Geoffrey Blainey (AC), Professor Brian Caldwell (Chair, LLEAP Advisory Group) and other key figures from philanthropy and education will discuss the big issues to emerge from year one of the project at the LLEAP Celebrate & Learn Forum from 11am to 1pm on Tuesday 24 April in the Victorian State Library's Experimedia room.

The LLEAP project is an initiative of the Australian Council for Educational Research’s Tender Bridge team in partnership with The Ian Potter Foundation and the Origin Foundation. For further information visit www.acer.edu.au/lleap. To reserve your place at the LLEAP Forum email Leanne Eames at (JavaScript must be enabled to view this email address).

NAB Schools First applications open

NAB Schools First enters its fourth year in 2012 with $3 million in funding available to 130 outstanding school-community partnerships across three award categories. This year there will be 55 Impact Awards, 65 Seed Funding Awards and 10 Student Awards. Applications for each of these awards are open now and close on 29 June. The winners will be announced in August.

NAB Schools First is a strong partnership between NAB, ACER and the Foundation for Young Australians. It is Australia’s largest corporate initiative of its kind and is open to all schools around the country. To date, 305 Australian schools have shared in over $15 million award money to support their school-community partnership. To find out more and to download application forms, awards criteria, guidelines, and Terms and Conditions visit www.schoolsfirst.edu.au

First national conference on Adult Language, Literacy and Numeracy Assessment

Registrations for ACER’s inaugural National Adult English Language, Literacy and Numeracy Assessment Conference close soon. To be held in Melbourne on 4 May 2012, the conference will cover the main topics and research regarding the language, literacy and numeracy (LLN) skills of the Australian adult population from an industry and training perspective. Presentations will also cover 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. Registrations close on Friday 24 April. For further information, including a list of speakers, please visit www.acer.edu.au/nallnac/
Research Conference 2012
School Improvement: What does the research tell us about effective strategies?

ACER’s annual research conference will take place at the Sydney Convention and Exhibition Centre, Darling Harbour from 26-28 August 2012. Further information including registration details, the conference program and a list of speakers is available from www.acer.edu.au/research-conference. Enquiries may be directed to Margaret Taylor by phone to 03 9277 5403 or by email to (JavaScript must be enabled to view this email address)

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