Improving our understanding of learning

A new Science of Learning Research Centre led by a consortium of researchers at the University of Queensland, the University of Melbourne and ACER will work with teachers to enhance our understanding of the learning process.

Commonwealth Science and Research Minister Dr Craig Emerson in May announced $16 million in funding for the Centre, which will bring together researchers in education, neuroscience and cognitive psychology.

The Centre will investigate effective learning practices in the light of current knowledge about basic learning processes and factors that influence successful learning, explained Dr Mike Timms, Director of the Assessment and Psychometric Research program at ACER.

'Education neuroscience offers great promise for understanding how learning takes place in the brain so that we can help all students to learn,' said Dr Timms.

Professor Ottmar Lipp, from the University of Queensland’s School of Psychology, will lead the Centre. Professor Lipp said the Centre’s cross-disciplinary and inter-professional approach will enable researchers to develop a scientific evidence base that can be used to enhance learning.

'State-of-the-art experimental classrooms will be established in Brisbane and Melbourne so that the neurological, psychological and social aspects of learning can be studied and measured while students are learning,' he said.
Professor John Hattie, Director of the Melbourne Educational Research Institute at the University of Melbourne’s Graduate School of Education, said, ‘We have become very good at transmitting knowledge to our students, but our young people need more than just knowledge; they also need to be able to assess and manipulate knowledge; to think critically and analytically.

‘This exciting partnership will help us understand more about how we learn, so that we can ultimately teach students these incredibly important skills.’

Researchers from Flinders University, Deakin University, the University of New England, Charles Darwin University and Macquarie University are also part of the consortium.

The Centre is a key recommendation of the Prime Minister’s Science, Engineering and Innovation Council Expert Working Group report, Transforming Learning and the Transmission of Knowledge.

Dr Timms, Professor Lipp and Professor Hattie will be speaking at the 2013 ACER Research Conference, ‘How the Brain Learns: What lessons are there for teaching?’ in Melbourne 4-6 August. For more information on the conference, visit www.acer.edu.au/conference.
Quantifying the return on investment of workplace training

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Research by the Australian Council for Educational Research (ACER) for the Australian Industry Group (Ai Group) is helping employers identify the quantifiable return on investment in literacy and numeracy training for their workers.

ACER is developing return on investment instruments to document the productivity benefits arising from employer provision of literacy and numeracy training, and the costs involved in such training, in order to provide a basis for estimating the return to employers from investing in literacy and numeracy training.

ACER Research Director Dr Phil McKenzie discussed the ongoing research with Ai Group Policy and Projects Manager, Education and Training, Michael Taylor, at the second annual National Adult Language, Literacy and Numeracy Assessment Conference in Sydney in May.

Dr McKenzie, who is leading the research, told delegates to the conference that estimating the return to employers from investing in literacy and numeracy training provides several benefits.

'The instruments developed through the project are also intended to be a resource that employers more broadly can use to evaluate the pay-off from their existing training programs and to help plan future training investments,’ Dr McKenzie said.

ACER’s 'return on investment' instruments are being trialled during 2013 in selected Workplace English Language and Literacy programs.

The need for literacy and numeracy training in the workplace was highlighted by the preliminary results of the Programme for the International Assessment of Adult Competencies (PIAAC) released in February, which revealed that many adult Australians do not possess the literacy and numeracy skills necessary to participate fully in modern life and work. ACER
Research Director Juliette Mendelovits and Senior Research Fellow Mr David Tout addressed the PIAAC data at the conference.

The conference featured four keynote addresses and twenty other conference and pre-conference sessions. Keynote speakers included:

- Professor Geoff Masters, CEO, ACER;
- Dr John Mitchell, Managing Director, JMA Analytics;
- Robin Shreeve, CEO, Australian Workforce and Productivity Agency; and
- Pam Christie, Managing Director, TAFE NSW.

The second annual National Adult Language, Literacy and Numeracy Assessment Conference, addressing the theme ‘Building on evidence to improve skills,’ was held at Ultimo College, Sydney Institute, from 9 to 10 May and was hosted by ACER.

Further information is available from www.acer.edu.au/nallnac
Putting collaboration into practice

Government officials, academics and practitioners from the education and philanthropy sectors gathered at a forum in Melbourne in April to celebrate the launch of the second in a series of practical guides to help grow ideas in education for maximum impact.

Opening the forum, Victorian Minister for Education, Martin Dixon said partnerships are a key part of education.

'The education of our young people is a partnership, is a community responsibility,' Mr Dixon said.

'Everybody’s got a part to play in it. It’s not just one particular group's responsibility: it’s not just the responsibility of parents; it’s not just the responsibility of schools, or governments or the community within which the school is actually situated.

'Because we're educating young people for a future and as members of a community – whether it's a local community, a state community, or world community – everybody has a stake in education and, therefore, we all have to do what we are best at doing together with each of our talents and what we can all bring to the table,' Mr Dixon said.
Mr Dixon's sentiments were echoed by visiting academic Professor Bill Lucas, Co-Director of the Centre for Real-World Learning at the University of Winchester, who in his presentation said, 'Helping learners thrive is the country's job, not any one institution or any one individual.'

Professor Lucas told the forum that there is an instinct hard-wired into the human species to collaborate, describing it as the 'social glue'.

'We hear a lot about partnerships and a lot about collaboration, and the devil, I think, is in the detail about how we do that,' Professor Lucas said.

Professor Lucas spoke extensively about collaboration and engagement as vehicles for positive change, and discussed some of the barriers that affect the ability of individuals and groups to engage.

'Collaboration on a Monday morning is working with people who aren't like you,' Professor Lucas said.

'We are all irritatingly different. "If only everyone was like me, then it would be so much easier to work with them," but of course we're not.

'When you're working with colleagues it will slow you down at first, so expect it! Expect it will slow you down, and you'll go deeper and you'll do more worthwhile, more complex work as a consequence,' Professor Lucas said.

Writing in the LLEAP Dialogue Series, Professor Lucas said we know that schools and not-for-profits want philanthropy to open up new horizons to them, and that philanthropics want to be catalysts for change.

'For the sake of all learners we simply have to put collaboration into practice,' he wrote, adding at the forum that people should 'just do it'.

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'It's a myth to say that you have to be completely signed up to something before you do it. Just relax a bit and do it thoughtfully and reflect as you're going. If you make too big a deal of it then I think maybe we miss the chance,' Professor Lucas told the forum.

*LLEAP Dialogue Series* co-author, ACER Principal Research Fellow Dr Michelle Anderson, picked up this thread in her closing address, saying, while 'just doing it' can be a challenge, 'We can wait or we can get out there and make connections for ourselves.'

'It's a way of taking the first of a hundred steps in a positive direction,' Dr Anderson said.

Just as Professor Lucas had earlier asked each person to think about one thing that they might try out differently, Dr Anderson asked everyone to reflect upon what they are doing that is mutually reinforcing to the bigger goal of improving outcomes for learners.

'What are you doing to create the conditions necessary for others to succeed?' Dr Anderson said.

The *LLEAP Dialogue Series (Year 2)* was launched at the Melbourne central office of the Victorian Department of Education and Early Childhood Development on Tuesday 23 April 2013. For further information on the Leading Learning in Education and Philanthropy (LLEAP) study and to download a free copy of the *LLEAP Dialogue Series* visit [www.acer.edu.au/lleap](http://www.acer.edu.au/lleap)
Leading school improvement

There are many things highly effective schools do to promote better teaching and learning in classrooms, some of which can be usefully understood in terms of 'school improvement,' as ACER Chief Executive Professor Geoff Masters explains.

'School improvement' typically focuses on areas of school practice that support improved teaching and learning. The first thing we know about highly effective schools is that they have an improvement agenda that is explicit, clear and shared across the school – so everyone in the school knows what they want to improve. This might be attendance levels, retention rates, post-school destinations, Year 12 results, literacy and numeracy levels.

The leadership team has adopted the agenda and all members of staff understand the agenda, are committed to it, play a role in implementing it throughout the school, and believe strongly and optimistically that improvement is possible.

The agenda is also expressed in terms of things that can be monitored in order to identify whether outcomes are improving. Outcomes might be expressed as explicit targets, with timelines, but are always measurable in terms of data of various kinds. Importantly, monitoring for improvement involves the whole school, so curriculum coordinators and classroom teachers use data in their decision making. This requires a commitment to building capacity to use data.

Highly effective schools place learning at the centre. There are high expectations, a commitment to every student learning successfully and a focus on supportive relationships between everybody in the school that focus on the learning agenda.
Highly effective schools also make good use of human and physical resources, and draw on resources beyond the school to maximise outcomes for their students. They actively seek ways to enhance student learning and wellbeing by partnering with parents and families, other education and training institutions, local businesses and community organisations.

Staff in highly effective schools work together as an expert teaching team, with a shared commitment to understanding how to support student learning, and a shared commitment to understanding highly effective teaching practices.

They also have a clear understanding of the curriculum that is shared and clearly documented across the whole school. At the same time, the leadership team in highly effective schools understands the importance of differentiation – and supports staff in identifying and understanding the needs of individual learners to tailor learning opportunities for them.

Finally, and maybe most importantly, highly effective schools are very focused on pedagogy. School leaders in highly effective schools see pedagogy as their job. They don't say, 'I'm managing the school; pedagogy is for teachers out there in classrooms.' They are actively involved in the quality of the teaching that is occurring within the school and typically have a strong view about the kind of teaching they would like to see occurring, support professional learning to enable this, and participate in this professional learning themselves.

Geoff Masters will be presenting on school improvement on Wednesday 19 June 2013 as part as the Bastow Institute for Educational Leadership 'Twilight Seminar' series. For further information and to register visit ACER Interactive.

Find out more about school improvement at www.acer.edu.au/nsit
ACER Update

Look out for Staff in Australia’s Schools survey invitations

A large sample of primary and secondary schools in all sectors and states and territories has been randomly selected and invited to participate in the third cycle of the Staff in Australia’s Schools (SiAS) survey. This voluntary survey, which should take about 20 minutes to complete, collects information directly from school teachers and leaders about their background and qualifications, their work, their career intentions, and school staffing issues. It is intended to provide a snapshot of the Australian teacher workforce that will map key trends since the previous SiAS surveys in 2006-07 and 2010 and may be used to assist in planning for the future. The online survey is open until the end of June 2013.

The Commonwealth Department of Education, Employment and Workplace Relations (DEEWR) commissioned ACER to conduct SiAS 2013. The Advisory Committee includes representatives of government and non-government school authorities in all states and territories, national principals associations, teacher unions, teacher education institutions and the ABS. For further information visit www.acer.edu.au/sias

Research Conference 2013
How the Brain Learns: What lessons are there for teaching?

Understanding the brain is a hot topic, as neuroscience comes up with new and surprising findings. ACER Research Conference 2013 makes links between this new knowledge and how people of any age can learn more effectively.

- What can educators expect from neuroscience?
- Are computers frying our brains?
- What is neuroplasticity and what does it mean for teaching and learning?
- How can we help people with dyslexia, dyscalculia, dyspraxia and ADHD?
These and other questions will be explored at Research Conference 2013. This multidisciplinary conference links research in neuroscience, psychology and classroom teaching practice. Join international and Australian researchers, teachers, psychologists and other professionals to consider how our emerging knowledge of the brain can contribute to better educational outcomes in the early years, adolescence and adulthood.

ACER’s annual research conference will take place at the Melbourne Convention and Exhibition Centre from 4-6 August 2013. 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 taylor@acer.edu.au

Principal for a Day

Principal for a Day is a collaboration between schools and their communities that aims to increase and strengthen relationships, based on knowledge and understanding, between the private sector and education. Victoria’s Principal for a Day event takes place this year on Wednesday 14 August. The program is a joint partnership between ACER and the Victorian Department of Education and Early Childhood Development (DEECD) and has been running in Victoria since 2001. Schools and community or business leaders interested in participating in the 2013 event can obtain more information from www.acer.edu.au/pfad or by contacting Ms Viv Acker on 03 9277 5617 or email pfad@acer.edu.au