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**Investigating computer and information literacy**

From Facebook, Twitter or Yammer to barcode scanners at the checkout to the latest Angry Birds app, information and communication technology (ICT) has fundamentally changed the way we communicate, work, shop and play. Similarly, educators, researchers and policy makers are grappling with the ways in which ICT is changing learning and schooling. Students learn to use ICT and use ICT to learn, and that has led in many educational systems not only to an interest in computer and information literacy, but also to the assessment of computer and information literacy as a component of monitoring student achievement.

Sound assessments of computer and information literacy depend on a uniform framework and empirically based set of outcome standards, and these are at the core of the International Study of Computer and Information Literacy (ICILS). The ICILS project, conducted by ACER and others for the International Association for the Evaluation of Educational Achievement (IEA), currently involves the education systems of 21 countries: Australia, Canada, Chile, Croatia, Czech Republic, Denmark, Germany, Hong Kong, Israel, the Republic of Korea, Lithuania, Netherlands, Norway, Poland, Russia, Slovak Republic, Slovenia, Spain, Switzerland, Thailand and Turkey.

There are three questions that ICILS seeks to answer in terms of students’ use of computers as information tools, rather than simply their capacity to understand information presented from a range of sources.

First, what variations exist between countries, and within countries, in student computer and information literacy?

Second, what aspects of schools and education systems are related to student achievement in computer and information literacy in terms of: the general approach to computer and information literacy education; school and teaching practices regarding the use of technologies in computer and information literacy; teacher attitudes to, and proficiency in, using computers; access to ICT in schools; and teacher professional development and school delivery of computer and information literacy programs?
Third, what characteristics of students’ backgrounds, and levels of access to, familiarity with and self-reported proficiency in using computers, are related to student achievement in computer and information literacy? Following on from this, how do these characteristics differ among and within countries; to what extent does measured computer and information literacy correlate with self-reported proficiency in ICT; and does the strength of this correlation differ among countries and groups of students?

ICILS is a big collaborative project. Working with the 21 National Centres of the participating countries are five organisations involved in preparing the ICILS instruments, namely: the IEA Secretariat, coordinating translation and translation verification processes; cApStAn, the translation verification contractor; ACER, developing the source instruments, reviewing national adaptations and coordinating software development; Sonet Systems, developing the testing software and running the software translation system and control systems; and the IEA Data Processing and Research Centre, handling data management and the online survey systems software for questionnaires for teachers, principals and ICT coordinators.

Representatives from all participating countries have extensive input into the shape of the project. So far there have been four face-to-face meetings in the two years the project has been running, and true to the assessment area, extensive ICT-based communication as well. The early focus of this collaboration has been on shaping the instruments to be used and ensuring they are true to the domain as well as meeting the needs of participants. More recently, work in ICILS has focussed more on operational matters in the lead up to the 2012 field trial which has already begun in some countries.

The field trial is scheduled to be completed in June 2012 and this will be followed by a review of the data analyses from the field trial and selection of instrument contents for the main survey, as well as operational planning for the main survey later this year. The main survey will follow in 2013, and detailed answers to the research questions will be available in 2014 when the report is released.

Further information about ICILS is available from icils.acer.edu.au
New resource to help grow educational ideas

A new resource designed to help grow ideas in education for maximum impact was launched in April. Leading Learning in Education and Philanthropy (LLEAP) is a three-year study of the impact of philanthropy in education. The findings from the first year of LLEAP were released in December 2011 and informed the development of the LLEAP Dialogue Series, a practical guide on grant making and grant seeking in education, co-authored by LLEAP Project Director and ACER Senior Research Fellow, Dr Michelle Anderson, and ACER Research Fellow, Dr Emma Curtin.

Pitched at inexperienced grant seekers and grant makers in education of all levels, the LLEAP Dialogue Series Guide is an evidence-based manual that provides practical tips, support materials and tools for effective grant seeking and making. The LLEAP Dialogue Series Cases companion document examines examples of effective engagement of philanthropy in education.

Speaking at the launch, Dr Michelle Anderson said that ‘dialogue’ was a fitting name for the resource because the concepts of collaboration and discussion underpin the work of the LLEAP project.

‘Great ideas with no way of taking them forward are wasted ideas,’ said Dr Anderson.

‘One of the light bulb moments from our work during the first year of LLEAP was the incredible breadth of expertise that philanthropy can offer schools.’

The LLEAP Dialogue Series was launched by noted historian and Governor of The Ian Potter Foundation, Professor Geoffrey Blainey, AC, who recounted examples of successful collaboration from Australia’s history, such as the advent of the Royal Flying Doctors Service. Professor Blainey also reflected that people can grow their ideas and learn through watching a good example, highlighting that the LLEAP Dialogue Series may be such an example to those working in education and philanthropy.

During the panel discussion held at the launch, Professor Brian Caldwell, Chair of the LLEAP Advisory Group, said it was important to get the LLEAP Dialogue Series Guide and the Cases companion document into the hands of every school and every philanthropic organisation in Australia.

‘It’s very rare that one can find a guide that is so immediately useable,’ said Professor Caldwell.

The Head of the recently established Origin Foundation, Mr Sean Barrett, described the LLEAP project as the ‘missing link’ that would have been invaluable in directing their own work to establish philanthropic collaborations in education.

In her closing address, Mrs Janet Hirst, CEO of The Ian Potter Foundation, spoke of the significant achievements that LLEAP has accomplished in its first year.

‘We expected to have taken a few steps down the road by this time but, true to its name, LLEAP has gone ahead in bounding strides,’ said Mrs Hirst.
The launch of the *LLEAP Dialogue Series* took place at the State Library of Victoria on Tuesday 24 April 2012. LLEAP is an initiative of ACER’s Tender Bridge, in partnership with, and with funding from, The Ian Potter Foundation and the Origin Foundation.

For further information about LLEAP, and to download the *LLEAP Dialogue Series*, visit [www.acer.edu.au/lleap](http://www.acer.edu.au/lleap)
Comparing school learning outcomes internationally

The UNESCO Institute for Statistics (UIS) has launched an initiative to track student achievement and its measurement worldwide. Known as the UIS Observatory of Learning Outcomes, the project will compile indicators of achievement among primary and secondary students in more than 200 countries. As a partner in the project, ACER was involved in a pilot study of the Observatory in 2011. ACER Deputy Director of International Surveys Dr John Cresswell is leading ACER’s involvement in the project.

The Observatory of Learning Outcomes contributes to the ongoing collective efforts by nations and the international development community to emphasise the importance of learning outcomes. It forms a key part of UNESCO’s Education for All agenda; a global commitment to provide quality basic education for all children, youth and adults. At the 2000 World Education Forum, 164 governments pledged to achieve Education for All and identified six goals to be met by 2015. Goal six seeks to improve the quality of education so that recognised and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

The design of the Observatory includes two components:

- A catalogue of all measures used by countries to understand the learning levels of their primary and secondary school children (i.e. from national assessments, including exams, and international sources) as well as selected attributes of the approaches countries choose to generate and express these indicators.
- A global database of internationally comparable indicators of learning outcomes by the end of primary school from existing and/or new assessments, with a focus on reading, numeracy and writing skills.

In 2011 ACER worked with the UIS during the pilot study of the catalogue component. The pilot involved collecting information about educational assessments from 24 participating countries.

The data collection process was centred around a template that allowed data collectors to record information about the attributes of each assessment—for example, if it was a national or international assessment, whether it was norm referenced or criterion referenced, if it was administered as a sample or to a census of students.

Following completion of the individual country reviews, ACER combined the information and designed two different ways to report on each country’s assessments. The design of the first style of report from the database emphasised each assessment and the results obtained by the country. Some of the attributes of the assessment were recorded in detail; for example, the grade and language of assessment.

The second style of reporting the information from the database was to focus on a particular subject area and display results for that area in the different assessments undertaken by the country. This allowed a side-by-side comparison of results that a country obtained in national and international assessments, allowing countries to get an indication of the level of their own national assessment compared to other countries. This was found to be very valuable in some countries where national results were very high, but international ones were much lower.
ACER prepared an evaluation report on the pilot study and submitted it to the UIS and the Advisory Board of the Observatory of Learning Outcomes in late 2011. The design of the project has now been endorsed and the UIS is in the process of considering the implications of scaling up the project from the 24 countries in the pilot study to all 200 countries in UNESCO. This will be a complex task and ACER is preparing a discussion paper to help provide direction.
Tracking demand in higher education

In 2012, Australian universities entered a new era of student selection and enrolment. Australia’s universities are now able to enrol as many students as they choose (or to be more precise, as choose them) under a funding system driven by student demand. ACER’s Joining the Dots Research Briefing, 'Tracking demand: An early audit of Australia's new student demand driven system', by ACER Senior Research Fellow Dr Daniel Edwards and ACER Research Fellow Ms Eva van der Brugge, explores the changes that have occurred in the system over the few years since this funding arrangement was announced.

This involves an early audit of the figures for 2012 in relation to those of the past six years, followed by some discussion of the consequences of student demand driven funding for the higher education system.

Key findings highlighted in this briefing are:

- Demand for university in Australia rose 2.1 per cent for 2012 enrolments and has increased 9.7 per cent since 2009.
- Among the states, Queensland and Victoria have experienced the largest growth in demand for university places over the past few years.
- University offers have surged in Australia following the announcement of student demand driven funding for the sector.
- In 2012, university offers increased 5.3 per cent nationally. This increase comes on top of notable rises of 3.5 per cent in 2011 and 6.4 per cent in 2010. This sudden growth directly parallels government policy announcements on student demand driven funding.
- Since 2009 the annual number of offers by universities has increased by 15.9 per cent, from about 200 000 in 2009 to more than 230 000 in 2012.
- The largest growth in supply of university places has occurred in Victoria, with a 22 per cent increase in offers since 2009. Queensland follows this with an 18 per cent rise over this period.

Joining the Dots is a subscription-based resource provided by ACER to those with an interest in Australian higher education. Further information and details for subscriptions are available at www.acer.edu.au/jtd or by emailing (JavaScript must be enabled to view this email address).
ACER Update

ACER Institute Leading Thinkers

ACER Institute’s Leading Thinkers is a national series that brings inspirational speakers to educators at all levels of policy and practice. This year, speakers and topics include:

- Dr Alison Davis, ‘Whole school improvement in literacy: Key questions to guide leadership’, Sydney 13 June / Melbourne 14 June / Brisbane 31 October
- Professor Helen Timperley, ‘Realising the power of professional learning: Whole school improvement’, Melbourne 7 August / Adelaide 8 August / Sydney 23 August / Brisbane 24 August
- Associate Professor Erica Frydenberg, ‘Coping skill development in the context of the social emotional curriculum: Skills to build resilience in adolescents’, Melbourne 11 September

Full details on all seminars and presenters are available from www.acerinstitute.edu.au/leading-thinkers

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)

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