Charting growth, outcomes and change

Hamish Bennett Coates, ACER
In 2008 ACER has worked with universities and governments across Australia to understand and improve educational processes and outcomes. Our reports and discussion papers have provided new perspectives on the pathways into higher education, what learners do at university, and the outcomes following graduation. It is vital to ensure that the most valid and effective processes are used to admit people into higher education who are capable of success. Over the last year ACER has been working with universities to implement and evaluate uniTEST as part of the national Student Aptitude Test for Tertiary Admission (SATTA) pilot. Results from an evaluation of the concurrent and predictive validity of uniTEST and the Special Tertiary Admissions TEST (STAT) are very encouraging, suggesting that aptitude test data provides a valuable complement to Australia's traditional reliance on achievement-oriented measures.

The Graduate Pathways Survey (GPS) was a major national ACER-led development in 2008, offering significant new perspectives on bachelor degree graduate outcomes five years after completion. National survey methodologies and instruments were developed and deployed in a data collection involving all universities. Reports are being prepared, and we look forward to sharing key findings in future editions of the update.

This update provides an overview of two related projects which have researched participation in science, mathematics and technology in Australian education, and the employment demand and outcomes for graduates with higher degree research qualifications in the science and mathematics fields.

A considerable amount of ‘latent data’ exists that, if strategically analysed, can provide powerful perspectives on inclusion, success, value and growth. We have worked with a number of institutions and agencies to bring such data together in meaningful ways, and to develop findings to support growth and change.

Of course leaders are learners too, and this edition of the Higher Education Update includes a story on the Online Leadership Learning System (OLLS) being developed by the University of Western Sydney and ACER with a grant from the Australian Learning and Teaching Council. This work, being tested through Martin Institute leadership programs, will offer a new way of thinking about tertiary education leadership.

Our international work in higher education expands apace, through research projects such as the 20-country Changing Academic Profession survey, the Australasian Survey of Student Engagement (AUSSE), and in early design-focused discussions about the OECD’s Assessment of Higher Education Learning Outcomes (AHELO).

This update provides a quick snapshot of ACER’s consultative design of a national Tertiary Engineering Capability Assessment (TECA), and of patterns emerging from 2008 AUSSE. A briefing is given on the OECD’s Programme for the International Assessment of Adult Competencies (PIAAC), for which ACER is developing items on behalf of the USA-based Educational Testing Service (ETS). The Irish Mature Students Admissions Pathway (MSAP), reflects an important development in that country.

Dr Hamish Coates
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A university degree is increasingly important for securing employment in the Australian labour market. Currently, growth in occupations that require a university degree is greater than growth in any other occupation type in Australia. However, university admissions procedures in Australia have grown historically in ways that may not be most effectively servicing contemporary needs.

In 2007, the Australian Government introduced a pilot program to identify and trial the use of one or more suitable student aptitude tests in university admissions. A two-stage pilot program of a national Student Aptitude Test for Tertiary Admission (SATTA) was introduced by the former Department of Education, Science and Training. The SATTA program aims to provide universities with additional information on prospective students and provide alternative pathways to university for students who may otherwise have been lost to educational development.

uniTEST, developed jointly by ACER and Cambridge Assessment in the UK, assesses candidates’ generic reasoning and thinking skills, which are considered necessary for successful university study. This test is a supplementary university entry pathway to the Equivalent National Tertiary Entrance Rank (ENTER) for students completing Year 12. The candidates’ uniTEST results may be considered alongside their academic achievement scores to help determine their suitability for university study.

While the evaluation of uniTEST was a small-scale study, the findings should not be generalised to the population of Australian students without further research evidence. The early results indicate a positive relationship between participants’ uniTEST results and first-year university marks.

The uniTEST evaluation examined the first-year marks of university students who would not have gained entry based on the ENTER score but were admitted based on the aptitude test results. The performance of these students was compared with that of a control group of students who gained entry to university through pathways other than uniTEST, most commonly through Year 12 scores.

The analysis found that the uniTEST students and the control group students showed similar levels of academic engagement, learning and skill development. This suggests that uniTEST was able to facilitate the admission to university of students who otherwise would not have received a place, and that these students performed on par with their counterparts who gained entry through traditional means.

The Special Tertiary Admissions Test is administered by tertiary admissions centres in association with ACER. STAT is an alternative tertiary admissions test for those candidates who do not have a recent Year 12 certificate. It is also used by some specialist courses as a further entry selection criterion.

Similarly positive, the analysis of STAT validity found that STAT results correlate strongly and consistently with Year 12 results, and that STAT results are reliable substitutes in those cases where university candidates do not have ENTER scores.

The evaluation of STAT included a comprehensive large-scale study of almost 10,000 candidates from 30 Australian universities. Evidence from the evaluation indicates that STAT provides consistent measurement of target constructs in ways that remain stable over time and applicant groups, has robust technical properties and provides sound objective data for informing tertiary admissions processes.

Further, the STAT instrument was reviewed by six experts in educational assessment. These experts agreed that the test items were of high quality and that the STAT is a useful tool to select candidates.

A growing number of higher education institutions will use uniTEST for selection of candidates for 2009 entry.

ACER’s work on this project was conducted by Dr Hamish Coates, Tim Friedman, Sam Ball and Luc Le. ACER’s involvement in the uniTEST and SATTA programs is led by Marita MacMahon-Ball and Sue Nankervis.

Maths and science: skills in demand?

A new study led by ACER for the federal Department of Education, Employment and Workplace Relations is investigating employment demand and outcomes for graduates with higher degree research qualifications in the science and mathematics fields.

The study is identifying sources of supply of highly skilled and educated persons in the fields of science, technology, engineering and mathematics, both in Australia and an international context. It aims to examine the current and past supply of such skills as well as issues that could affect supply in the future.

While research has been carried out into broad labour force demand issues, there is an increasing need for more detailed information relating to the employment opportunities available for graduates with specific skills and within particular fields. For the high-end of the science and mathematics fields, this project will fulfill this need.

Quantifying supply and demand for graduates with higher degrees in mathematics and science is a complex task. The project involves the synthesis of numerous sources and types of data, consultation with key groups of trainers and employers and a conceptual framework from which to identify important aspects of the dynamics of supply and demand.

The research is identifying factors dictating industry demand for higher degree research graduates in science and mathematics in Australia and investigating the balance between supply of and demand for skilled workers in these areas.

The project involves consultation with a range of employers within Australia who employ higher degree research graduates from within the science and mathematics fields as well as consultation with key stakeholders involved in training, advising and providing industry support to these graduates and their employers.

In-depth case studies of good practice in employment and graduate destinations for higher degree research students in the mathematics and science fields provide important examples that employers, universities and government bodies can identify and use as benchmarks in these fields. The case studies highlight the practices of a small number of employers who have had particular success in attracting and retaining higher degree graduates in the areas of science and mathematics, and providing worthy career trajectories for them.

Ultimately, the study aims to evaluate ‘good practice’ within Australia among employers attracting, retaining and providing valuable opportunities to graduates in the science and mathematics field who have higher degree research qualifications.

Australia’s industry and economy increasingly relies on the provision of highly skilled individuals. It is critical that government and policymakers understand the issues relating to supply and demand for skills across industries and disciplines. Individuals with advanced training in the sciences play a very important role in shaping the design and development of a wide range of products and services.

The project is being conducted by Dr Daniel Edwards, with support from Professor Fred Smith, former Deputy Vice Chancellor of Research at La Trobe University. It will be completed in early 2009.

For more information, contact the Department of Education, Employment and Workplace Relations by visiting www.deewr.gov.au/contact.
A new report released by ACER has confirmed that Australia faces significant challenges in boosting participation in science studies in higher education. The report, Participation in Science, Mathematics and Technology in Australian Education, by Dr John Ainley, Dr Julie Kos and Marina Nicholas is published as ACER Research Monograph 63. It provides updated figures on university participation in science and technology studies, drawing on cross-sectional commencing student data from the Higher Education Statistics Collection (HESC) maintained by the Department of Employment, Education and Workplace Relations (DEEWR) as well as longitudinal data from the Longitudinal Surveys of Australian Youth (LSAY) in which cohorts are followed individually from school to university (and elsewhere). It also includes data relating to shortages of mathematics and science teachers from the Staff in Australia’s Schools 2007 survey that ACER conducted for the Commonwealth.

The report focused on the major science-based broad fields of education: science, information technology, engineering, architecture, agriculture and health.

Much of the focus of international attention on participation in science, technology, engineering and mathematics has been on declines in the percentages of graduates in those fields. This has been expressed in terms of a concern over supply of scientists and engineers and its potential impact on future research and development.

The report analysed commencing enrolments by domestic students in undergraduate courses in science-related fields varied over the period from 2001 to 2006. The overall pattern has been a decline in information technology and a rise in health; there was a substantial increase in the number of undergraduate domestic commencements in health (approximately a 35% increase) and a substantial decline in information technology commencements (approximately a 50% decrease).

There were small declines in the natural and physical sciences as well as in agriculture and environmental studies and a small increase in architecture and building but on the whole enrolments have remained steady across these areas.

Overall, during this six-year span there was a small decline in the numbers of domestic undergraduate commencements in science-related fields of education.

Inevitably, not all of those students commencing science degrees will complete them. Course change was highest among students in the natural and physical sciences (22%), then medicine, dentistry and veterinary science components of health (17%), society and culture (17%), and engineering and related technologies (13%).

Attrition from courses was also linked to field of study. Attrition rates were below ten per cent in all areas of health. Attrition in engineering (11%), the natural and physical sciences (13%) and information technology (15%) were near the average level across all university education.

Completions in science-related fields reflect the flow through of the pattern for commencements. There has been growth in health and a decline in information technology. Completion rates for veterinary science (almost 90%) and health (77%) were substantially higher.
than those for general science (58%) and engineering (59%). From these analyses it could be concluded that only around 58 per cent of students entering a science or engineering course, but around 79 per cent of those entering a health course and 76 per cent of those entering nursing, would have completed that course within seven years after commencement.

Undergraduate science students taking a generalist degree appeared to be the least likely to complete their courses. It is possible that students begin courses in these fields with less clear goals than students entering courses in other fields of study and are more likely to change goals during their course, and to possibly drop out of study. It is also possible that employment options for these general courses may appear less clear to students during their course.

Over the period from 2001 to 2006 there has been a small increase in the number of domestic undergraduate course completions in science-related fields of education. However, that increase has not kept pace with the increase in the total number of domestic undergraduate course completions. The net result has been a decline in the percentage of science-related course completions from 40.4 to 38.7 per cent.

Further to the concern over a lack of students taking up science degrees is the concern over the quality of the entrants to those fields. The ACER report confirms that there has been a decline in the academic background of entrants to some science courses, as measured by the median Equivalent National Tertiary Entrance Rank (ENTER) scores required for enrolment.

In particular, the report noted a substantial drop in the ENTER scores of commencements in information technology, although ENTER scores for the natural and physical sciences and for engineering appear to have remained relatively high.

Commenting on the findings, the report’s lead author, ACER Deputy CEO (Research) Dr John Ainley, said that the key to generating higher levels of participation in and quality of entrants to science-related studies at university was to strengthen the science curriculum in schools.

The report found evidence of a strong connection between specialising in science in the final year of secondary school and commencing science-related fields of education at university. Sixty-three per cent of those studying two physical science subjects (physics and chemistry), and 50 per cent of those studying any two science subjects in Year 12, continued on to a science-related field in university.

The report was commissioned by the Australian Government Department of Education, Employment and Workplace Relations to update and extend the Background Data and Analysis component of the 2003 report Australia’s Teacher’s: Australia’s Future – Advancing Innovation, Science, Technology and Mathematics to include new data that have been published or become available since its publication.

The full report, Participation in Science, Mathematics and Technology in Australian Education, by Dr John Ainley, Dr Julie Kos and Marina Nicholas is available from the ACER website at www.acer.edu.au/research_reports/monographs.html.
Learning for leadership online

Leadership roles in universities are becoming increasingly complex as leaders juggle competing demands: the challenge of having to work productively with a diverse range of people; the need to deal with large systems and complex regulations; and having to handle the impact of limited resources.

How, then, can university leaders best develop the skills they need to ensure the highest possible standard of education within their institutions?

The next phase of this project is building on the survey results to develop a range of products to support an academic leadership capability framework for Australian higher education.

In 2008 and 2009, UWS and ACER will convert key findings from the survey into an Online Leadership Learning System (OLLS) resource.

The OLLS will provide specialised online learning tools for university leaders in each of the roles of Deputy Vice-Chancellor; Pro Vice-Chancellor; Dean, Associate Dean, Head of School or Department, Head of Program, and Director of Learning and Teaching.

The system will provide strategies to specifically address the challenges identified by the leaders in the Learning Leaders in Times of Change survey: leaders will be able to access information such as overviews and case studies of the most common challenges that are encountered in their specific leadership role, and the key strategies found to be most effective by existing practitioners in addressing these challenges. These detailed case studies, being developed by ACER in collaboration with the LH Martin Institute will be workshops in the LH Martin Executive Leadership Programs amongst experienced colleagues. It is envisaged that over time a significant case database will be developed.

The OLLS will put into action the recommendations of the Learning Leaders in Times of Change survey, such as providing role-specific, "just-in-time, just-for-me" learning tools embedded in a broader flexible learning system. This model parallels what universities are seeking to implement with their students in the online learning environment.

Development of the OLLS has been endorsed by the 1,100 university leaders from Australia and around the world who either generated or reviewed the findings of the Learning Leaders in Times of Change survey, as well as by members of the Australian Learning and Teaching Council board.

The system is in the early stages of a pilot application at the University of Melbourne’s LH Martin Institute for Higher Education Leadership and Management. At least 25 Australian universities will be involved in the development phase of the OLLS.

This work is led by Professor Geoff Scott (UWS) and Dr Hamish Coates and Michelle Anderson (ACER).

Visit www.altc.edu.au for more information.
Increasingly, tertiary institutions and stakeholders are searching for more valid and effective ways to measure and monitor education quality and outcomes. The production and traction of international rankings over the last few years has highlighted the lack of and need for greater information in this area. These rankings have not been sufficient, either methodologically or in terms of their limited focus, to meet the needs of universities and their communities.

The Group of Eight (Go8) universities in Australia has sponsored ACER to design an assessment that measures the capabilities developed through bachelor degree engineering education. The Tertiary Engineering Capability Assessment (TECA) is designed to be national in scope and have international relevance.

The aim of the TECA is to help institutions determine the extent to which later-year engineering students have developed the capabilities required for effective professional performance in Australia and internationally. Essentially, it will measure each graduate’s capacity to work as an effective engineer.

In October and November ACER worked with representatives of institutions and the Australian engineering community to develop the proposed design. Research and international competency statements were reviewed. Consultations were held with key stakeholders, whose formative input and encouragement helped with the design.

A concept design was delivered to the Go8. This provides a conceptual overview of the domain and includes key details relating to development of the instrument and administration. This is potentially an important document for engineering education in Australia, as it defines what should be measured by a validated assessment of outcomes, and how the assessment should be conducted.

The TECA is designed to measure students’ knowledge and skills towards the end of a three-, four- or five-year bachelor degree. It will assess competencies that are fundamental and ‘above content’ – that is, it would focus on the capacity of students to extrapolate from what they have learned and apply their competencies in novel contexts unfamiliar to them.

It is anticipated that a pilot administration will be conducted in September 2009 with a sample of tertiary institutions. As with the OECD’s planned Assessment of Higher Education Learning Outcomes (AHELO) Feasibility Study, the TECA is not intended to establish a ranking of higher education institutions. Rather, it is designed to provide results that institutions can use for benchmarking and continuous improvement.

ACER’s work on the TECA was conducted by Dr Hamish Coates, Alexandra Radloff and Marita MacMahon Ball.

Contact Dr Hamish Coates at ACER for further information.
Enhancing engagement – AUSSE 2008

The Australasian Survey of Student Engagement (AUSSE) provides data that Australian and New Zealand higher education institutions can use to attract, engage and retain students. The AUSSE reports on the time and effort students devote to educationally purposeful activities and on students’ perceptions of the quality of other aspects of their university experience.

Twenty-nine institutions participated in the 2008 AUSSE collection, with 10 of these also conducting a parallel survey of staff. The collection was undertaken in August and September. Reports have just been released to institutions, and a public report of key findings will be prepared in early 2009.

A series of workshops helped further develop the AUSSE this year. Conducted between March and July with hundreds of staff from all Australasian universities, these workshops helped develop understanding of student engagement and provide feedback on survey resources and collection processes.

The AUSSE measures student engagement through administration of the Student Engagement Questionnaire to a representative sample of first- and later-year students at each institution. With formative links to the North American National Survey of Student Engagement which has been deployed at more than 1,300 universities and colleges across the United States and Canada, the AUSSE provides data that complement and extend current collections of data that focus on satisfaction with the quality of teaching and the learning environment. It thereby makes available to higher education institutions a new means for measuring and monitoring the effectiveness of learning and teaching.

Students’ participation in active learning, interactions with staff, enriching experiences and work-integrated learning increased between first and third years. They also reported developing their high-order thinking and general learning outcomes. Students’ overall satisfaction fell between first and third year; however, as did, reassuringly, their intention to depart university before completing their study.

Overall results for Australasia were on par for those reported in 2007, the first year in which the AUSSE was conducted. As in 2007, results for Australasian institutions were lower than those in the USA. Particular differences existed for student-staff interactions, and for growth in the areas of active learning and participation in enriching educational activities.

Taking a finer level of analysis brings out interesting findings. While 80 per cent of first-year students said they had not participated in a community-based project, this fell to 69 per cent by third year. Thirty-nine per cent of students in first year discussed their grades or assignments with teaching staff, which rose to 54 per cent by third year. Participation in practicums, internships, fieldwork and clinical placements rose from 9 to 28 per cent across these years of study.

This year also saw the launch of the AUSSE Research Briefing series – with the first three briefings focusing on using student engagement perspectives to build cultivating learning climates; on the engagement of international students; and on the engagement of various forms of ‘distributed learners’.

A series of AUSSE Enhancement Guides have been designed, providing advice on areas such as developing institution-wide approaches to student engagement, engaging students in the AUSSE, and monitoring quality data over time.

Dr Hamish Coates is the AUSSE Project Director. He is supported by a team of psychometricians, software developers and other support staff.

Resources and summary reports are available at www.acer.edu.au/ausse.
OECD to test adult learning

Following its successful Programme for International Student Assessment (PISA) for testing the educational attainments of 15-year old school students, the Organisation for Economic Cooperation and Development (OECD) is launching a challenging new project to assess the knowledge and skills of adults.

ACER leads a research consortium to conduct PISA, which is the largest assessment of its kind in the world. The most recent round of the assessment, conducted in 2006, evaluated the scientific, reading and mathematical literacy of 400,000 15-year-old students from 57 countries.

The OECD Programme for the International Assessment of Adult Competencies (PIAAC) is a similarly ambitious project. It will assess the level and distribution of adult skills across countries, focusing on the cognitive and workplace skills needed for successful participation in today’s work environment. The assessments will comprise literacy, numeracy and information and communications technology skills. PIAAC will also gather data on participants’ educational backgrounds and professional attainments.

Following development work over the next two years and a field trial planned for 2010, the first PIAAC tests will take place in 2011. ACER has been sub-contracted by the consortium implementing PIAAC to develop the new literacy items that will be administered in the first administration of PIAAC.

The OECD plans to use the results of PIAAC to identify and measure differences between individuals and countries in competencies believed to underlie both personal and societal success. It will then gauge the performance of education systems in generating the required competencies.

For younger cohorts, PIAAC will complement the results of PISA by providing measures of skill following completion of compulsory education. For older cohorts, PIAAC will allow examination and analysis of the processes of skills loss and maintenance, and the effectiveness of education and skill formation systems in supporting skills development over the lifecycle.

ACER’s work on PIAAC is being led by Juliette Mendelovits.

Further information on PIAAC is available from: www.oecd.org
Mature students follow path to university

Student diversity on university campuses is an important consideration for institutions around the world. Ensuring a mix of students from a range of backgrounds allows students to share a wealth of experiences and create multifaceted learning communities. Mature-age students are an integral part of this mix, as they bring with them a variety of life experiences and knowledge, and model lifelong learning for younger cohorts.

Following this philosophy, the government in Ireland recently decided to work with the National University of Ireland to increase the intake of mature-age students without standard qualifications to 15 per cent.

While the university recognised the value of attracting this cohort of students, it faced the dilemma of how best to select suitable enrolments from candidates without standard qualifications such as school certificates. Based on ACER’s track record in the development, management and research of selection tests for undergraduate programs, ACER was contracted to create an appropriate admission test for mature-age students.

ACER developed the Mature Students Admissions Pathway (MSAP), an admission test for mature-age student entry to the College of Arts, Celtic Studies and Social Sciences at University College, Cork; and the College of Arts and Celtic Studies, and the College of Human Sciences, at University College, Dublin.

MSAP will assess mature-age candidates, especially applicants who have been out of study for a long time, to give universities an accurate indication of candidates’ abilities to cope intellectually with higher education. The test is designed to assess a range of competencies considered important for success in tertiary study.

MSAP tests candidates’ abilities to understand and analyse material, to think critically about issues and to organise and express their thoughts in a logical and effective way. It is a two-hour paper-based test consisting of two writing tasks designed to assess written English, and 35 multiple-choice questions designed to assess reasoning in the humanities and social sciences.

University College Cork and University College Dublin will use the MSAP initially for entry to humanities programs, but in future implementations will consider adding a quantitative reasoning section to the test and using it as a pathway into science programs as well.

The first sitting of the MSAP test will take place on 14 February 2009. Registrations are open until 20 January 2009. Test centres will be located in Cork, Dublin, Galway, and Sligo.

Further information is available from http://msap.acer.edu.au

ACER’s work on this project is being led by Marita MacMahon Ball.
Longitudinal perspectives on the higher education experience

Longitudinal data can provide important insights into the pathways that young people follow over time and the key influences on their educational and labour market experiences. ACER has recently released a series of briefings that summarise key findings from the Longitudinal Surveys of Australian Youth (LSAY) analytical program that it managed for the Australian Government until 2007. Two are particularly relevant to higher education.

LSAY Briefing No. 14, Initial Educational Experiences of Tertiary Students, by Kylie Hillman, presents information about the initial experiences in higher education and TAFE reported by national samples of students from the Year 9 classes of 1995 and 1998. Issues examined include satisfaction with aspects of student life, main areas of difficulty experienced during the first year of tertiary study, changes to initial enrolments, withdrawing from tertiary study, and deferring study.

LSAY Briefing No. 18, University Study in Australia: Persistence, Completion and Beyond, by Dr Julie McMillan, charts the progress of young people from national samples of students from the Year 9 classes of 1995 and 1998 through university up to the age of 23 years. It presents information about the difficulties young people encounter in the transition from school to university study, the numbers that persist in their studies and graduate, and the benefits of university study. It also examines the issue of demand for university places and what young people who apply but miss out on a university place do instead.

Both papers can be downloaded from www.acer.edu.au/lsay/briefs.html
The Australian Council for Educational Research (ACER) is one of the world’s leading educational research centres. Its mission is to create and promote research-based knowledge, products and services to improve learning across the lifespan.

ACER was established in 1930 and for more than 75 years has built a strong reputation as a provider of reliable support and expertise to education policy makers and professional practitioners. As a not-for-profit organisation, independent of government, ACER receives no direct financial support and generates its entire income through contracted research and development projects and through products and services that it develops and distributes. ACER has experienced significant growth in recent years and now has around 250 staff located in Melbourne, Sydney, Brisbane, Perth, Dubai and New Delhi.

ACER is a leader in the provision of quality educational research, both within Australia and internationally. As a national, independent research body, ACER brings a high level of expertise and objectivity to its work.

In recent times ACER has expanded on its program of research and development in support of learning in vocational education and training and in higher education institutions while maintaining and expanding work undertaken in support of schools.

Blending solid experience and creative talent with established methodologies, ACER is a full-service research consultancy specialising in collecting and interpreting information to shape strategic decision making. Researchers bring many years of experience and expertise in a range of disciplines and research methods to their projects.

ACER has six research programs:

- **Research into Transitions and Post-school Education and Training** explores influences on the educational and occupational pathways of young people as they progress from school to further education, training and work. Studies investigate the labour market and social outcomes of different pathways as well as evaluations of particular policies and programs.

- **The Assessment and Reporting program** conducts research into a wide range of educational outcomes (academic and social). This work, undertaken for clients nationally and internationally and in support of ACER’s own tests and assessment programs, includes the refinement of test constructs; studies of test validity and reliability; assessment methods and formats; psychometric analyses of test data; and methods for item banking, online test delivery and reporting.

- **Research in the National and International Surveys area** draws on staff expertise in sampling, survey management, the analysis of survey data and the interpretation and reporting of results in conducting large scale survey research. Current work includes the leadership of three major programs of international surveys including the OECD Programme for International Student Assessment.

- **The Systemwide Testing program** identifies more effective ways of monitoring achievement across entire education systems.

- **Research into Teaching, Learning and Leadership** focuses on the relationship between teacher professional development and improved student learning.

The **Policy Analysis and Program Evaluation unit** explores education policy issues and conducts program evaluation.

In addition to being a national centre for educational policy research and advice, ACER develops and provides a range of research-based products and services to support the work of professional practitioners.

ACER provides secure, fee-for-service testing programs to schools, universities, employers and professional organisations. These programs include selection tests for entry to schools and universities, scholarship tests and tests for diagnostic and monitoring purposes, and recruitment tests.

The organisation also encompasses ACER Press, the Cunningham Library, the Centre for Professional Learning, the International Institute, and the ACER Leadership Centre.